DOCUMENT RESUME

ED 132 656 95 EA 008 940

AUTHOR Cohen, Elizabeth G.; And Others
TITLE Organization and Instruction in Elementary Schools: First Results, 1973. Technical Report No. 50.
INSTITUTION Stanford Univ., Calif. Stanford Center for Research and Development in Teaching.
SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.
PUB DATE Oct 76
CONTRACT NE-C-00-3-0062
NOTE 317p.; Appendix may not reproduce clearly due to small print

EDRS PRICE MF-$0.83 HC-$16.73 Plus Postage.
DESCRIPTORS Administrative Organization; Administrator Attitudes; Elementary Education; *Instruction; Organizational Climate; School Districts; *School Organization; *School Surveys; Staff Utilization; *Student Attitudes; Tables (Data); *Teacher Attitudes
IDENTIFIERS California (San Francisco)

ABSTRACT

This publication is an interim report on a two-year longitudinal study of the relationship of school organization to classroom teaching. It examines patterns of instruction and staff utilization at the school and district levels, with special concentration on the linkages between those levels. The report describes the variety and complexity of organization and instruction found in San Francisco-area schools in 1973, based on data from a stratified random sample of elementary schools in six counties. Superintendents, principals, and teachers in 188 schools from 34 districts filled out questionnaires and were interviewed about organizational patterns at their respective levels. A number of classrooms were also observed, and third-grade students completed questionnaires. Separate chapters analyze the effects of organizational features on classroom complexity, the connection between classroom staffing patterns and instructional technology, the weak links among different organizational levels, the relationship between organizational patterns and teacher satisfaction, and the effect of the organization on children's satisfaction with school. (Author/JG)

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ED132656

Technical Report No. 50

ORGANIZATION AND INSTRUCTION IN ELEMENTARY SCHOOLS
First Results, 1973

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October 1976

EA 008 940

Published by the Stanford Center for Research and Development in Teaching, supported in part as a research and development center by funds from the National Institute of Education, U. S. Department of Health, Education, and Welfare. The opinions expressed in this publication do not necessarily reflect the position, policy, or endorsement of the National Institute of Education. (Contract No. NE-C-00-3-0062.)

Introductory Statement

The mission of the Stanford Center for Research and Development in Teaching is to improve teaching in American schools. Current major operations include three research and development programs--Teaching Effectiveness, The Environment for Teaching, and Teaching and Linguistic Pluralism--and two programs combining research and technical assistance, the Stanford Urban/Rural Leadership Training Institute and the Hoover/ Stanford Teacher Corps Project. The ERIC Clearinghouse on Information Resources is also a part of the Center. A program of exploratory and related studies provides for smaller studies not part of the major programs.

This report presents the results of the first wave of a longitudinal study of Bay Area schools by the Environment for Teaching Program.

Acknowledgments

We wish to recognize the foremost contributors to this study: the individuals in school districts and schools in the San Francisco Bay Area. Thirty-four school superintendents, nearly 200 principals, 232 teachers, and 300 students took time from their already overtaxed schedules to be interviewed and to complete questionnaires.

While our pledge of confidentiality precludes recognition of these participants (districts, schools, or individuals), we do wish generally to extend our appreciation for their efforts. In one respect, at least, we are able to offer some concrete return for their assistance: we believe that our results will provide helpful insights for teachers and administrators as they labor to strengthen and improve learning environments.

In addition, the contributions of individuals within the Stanford Center for Research and Development in Teaching must be recognized. Dr. Stanley Zehm and Dr. Jon Schaffarzick, former research assistants, made valuable intellectual contributions. Larry Brillson, Barbara Wigton, Shirley Weitz, Jackie Kennard, and Mary Kugland provided administrative and clerical support. Penney Jordan, Rick Wilson, and Silvia Solotar provided methodological assistance. Bruce Harlow, Betty Smith, and Sumi Kawasaki of the Center's Publications and Dissemination unit combined their efforts to make our prose readable and bring this report to its readers.

Abstract

This interim report on a two-year longitudinal study addresses the relationship of school organization to classroom teaching. It examines patterns of instruction and staff utilization in the context of school and district, with special concentration on the linkages between these levels.

A stratified random sample of elementary schools in six San Francisco Bay Area counties was drawn. Superintendents, principals, and teachers in 188 schools from 34 districts filled out questionnaires and were interviewed about organizational patterns at their respective levels. A number of classrooms were also observed; and third-grade students completed questionnaires.

The report describes the variety and complexity in organization and instruction found in Bay Area schools in 1973; it shows that past characterizations of elementary schools as tradition-bound and uniform today apply to few schools.

Chapters analyze the effects of organizational features of districts and schools on classroom complexity; the connection between classroom staffing patterns and instructional "technology"; the weak links among districts, schools, and classrooms; the relationship between organizational patterns and teachers' satisfaction; and the effect of the organization on children's satisfaction with school.

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CHAPTER 1

INTRODUCTION

How does the organization of school districts, schools, and classrooms affect instruction? The current efforts of the Environment for Teaching Program are focused on this question, and in this interim report we present our analyses of the first wave of a two-year longitudinal study of school organization and its relationship to instruction. The scope of our study has necessarily broadened as we have analyzed and interpreted the first wave's results. We are now as interested in the ways the organizational characteristics of districts, schools, and classrooms relate to each other as we are in their relationship to instruction. We suspect that the linkage (or lack of linkage) between the levels of school organization has many implications for the instructional work of schools.

Our original intention was to focus on the links between the staff organization of the school and its curriculum. We observed that schools vary in the complexity with which their staffs are organized and in the complexity of their curricular organization, which we conceived to be their work "technology." In the tradition of organizational research, we supposed that more complex school staffing patterns would produce more complex curricular arrangements. We also supposed that schools which adopted more complex curricular or instructional patterns would tend to evolve more complex and elaborate staffing patterns. To test these reciprocal hypotheses, longitudinal data are obviously required, but in this report we present some preliminary information bearing on them.

The purpose of this introduction is to provide the background needed to understand and interpret the results of the first stage of our two-year study. We begin by summarizing the five years of intellectual history that led to our current effort. We then describe (a)

This chapter was written by Terrence E. Deal and John W. Meyer.

the nature of the educational problem that influenced our direction; (b) the way this problem has been redefined by the theoretical framework guiding our research; (c) the research design, the sample, and the methods we used to obtain information from our respondents; and (d) the scope and structure of this report.

Two Tributary Studies

For the past five years, the Environment for Teaching Program has studied the organizational features of schools. Two studies, in particular, are important, because they laid the foundation for the present research. The first, conducted by John Meyer, Elizabeth Cohen, and others (Meyer & Cohen, 1971), looked at the impact of open space school architecture on aspects of teachers' work arrangements. The primary question was how team teaching in open space schools affected teachers' satisfaction and their perceptions of influence, interaction, autonomy, and evaluation processes within the schools. Meyer and Cohen were able to provide evidence that open space was related to alterations in the organization of work in schools. Teamed teachers in open space were, indeed, more satisfied and had more task-related interaction, more influence, and a greater willingness to legitimize the evaluation of their colleagues than teachers in conventional classrooms. Several affiliated studies went on to show: (a) that students in open space were more autonomous than students in conventional schools (Lueders-Salmon, 1972); (b) that open space had a significant effect on the organization of teachers, even with teaming held constant (Schiller, 1972); and (c) that, from the principal's perspective, open space and teaming both contributed to new work patterns among teachers and new relationships between teachers and principals (House, unpublished).

While Meyer and Cohen were investigating the impact of open space, Sanford Dornbusch and Richard Scott studied evaluation processes in schools and school districts, as part of a larger study testing propositions derived from a theory of evaluation in schools and other organizations (Dornbusch & Scott, 1975). The conclusion was that

compared to other organizations, schools do not have an adequate evaluation system, either hierarchical or professional. As a result, instruction in schools is virtually uncontrolled through formal organizational means. Again several affiliated studies were conducted. These looked specifically at evaluation processes in universities and colleges (Hind, 1970), alternative schools (McCauley, Dornbusch, & Scott, 1972), teacher teams (Marram, Dornbusch, & Scott, 1972), and public schools and school districts (Thompson, Dornbusch, & Scott, 1975).

As these two sets of studies were concluding, it became apparent that there were important overlaps between them, particularly in the area of evaluation. In fact, despite different conceptual formulations and different samples, the findings of one confirmed those of the other. The present study was designed to replicate parts of the earlier studies and to extend the areas investigated to include the "technology," or curricular and instructional aspects of teaching. The basis for this new direction was a theoretical paper by Scott and others (1972) entitled "Task Conceptions and Work Arrangements." The conceptualization we chose stems from the tradition in organization theory relating organizational structure to technology (Thompson, 1957; Perrow, 1967).

The Educational Problem

With the development of the theoretical link between organization and technology, we began to look even more carefully at classrooms, schools, and school districts. Would a study linking structure and technology in educational organizations address itself to problems that teachers and administrators themselves regarded as critical? Here we were especially concerned, since the location of the Environment for Teaching Program in a federally funded R&D center encourages us to use basic intellectual resources to provide solutions to contemporary educational problems. As we talked with field professionals, visited schools, and called upon our own internal resources, we became convinced that the theoretical link between structure and technology was,

in fact, related to an important educational issue. Why do so many instructional innovations fall quickly by the wayside?

Many explanations locate the problem in the instructional materials, practices, and methods themselves, with the organization of teachers, administrators, specialists, and other human resources as an unalterable given. Owing to our prior studies of some basic structural problems of schools and school districts, however, we were led to seek explanations for the failure of complex instructional techniques and methods in organizational patterns. Using the structure-technology perspective as a guide, we redefined the problem of failure to implement and support instructional innovations in schools as a problem of failure to develop an organizational structure that could meet the demands of an increasingly complex technology. Our early work and theories led us to believe, and thus to hypothesize, that the key to instructional problems in schools could be found in the patterns of work arrangements within classrooms, schools, and districts or in the linkage among these three levels. The importance of instruction or technology is not played down, but an equal emphasis is placed on the formal work setting in which instruction takes place. In sum, we believed that complex structures are needed to support complex instructional approaches, and that increasing structural complexity may produce more sophisticated approaches to classroom instruction.

Why is the relationship between organization and instruction of practical significance? At present, there is great dissatisfaction with established methods and materials in elementary instruction. It is no longer sufficient for schools to establish a list of subjects to be taught, a set of books and materials for each one, and a set of rules for mechanically applying these materials to pupils classified by grade (essentially, age). There is general agreement among many professionals and parents that this tradition of a stylized and simple curricular and instructional approach has failed, though there is little evidence on the success of alternative ways of teaching. The social agreement on the failure of traditional methods has produced a whole range of what are called in education "innovations." Nearly all educational

innovations being advocated increase the complexity of the work of the classroom. Consider a short list:

1. The open classroom
2. Open space facilities
3. Team teaching
4. Differentiated staffing
5. Individually programmed instruction
6. Instructional materials with built-in diagnosis, prescription, and evaluation
7. Materials differentiated by general or specific pupil ability characteristics
8. Special education for the educationally deprived student
9. Special education for the gifted student
10. Flexible grouping and other tracking ideas
11. The voucher plan

All of these fashionable educational ideas involve increasing the complexity of what is understood to be the traditional school, in which the students are sorted into classes, each class pursuing a relatively standardized instructional program. (In the one-room school, the predecessor of today's "traditional" school, considerable complexity may have been present.) Some of the changes involve increasing the complexity of traditional staffing of the classroom by replacing the single teacher (#2, 3, 4 above); others do it by using more complex materials systems (#1, 5, 6, 7); still others create complexity by reclassifying pupils into more complex categories than the traditional age-linked grading system (#5 -11). All of these innovations, with the possible exceptions of special education and voucher plans (which increase complexity between classrooms), increase the complexity within classrooms.

But increasing the complexity of the classroom is not a change that can simply be made while leaving the social organization of the classroom, the school, or the district intact. In some respects, classroom complexity is itself a considerable social change. In other

respects, it forces or requires basic social changes. Consider the following examples:

1. More complex staffing patterns create many new relationships between roles and interdependencies in work patterns. New patterns of coordination are absolutely required. Someone must work out the rights and duties--and the rules of cooperation--within the teaching team or the differentiated staff. These are working relationships that literally did not exist earlier.

2. More complex sets of materials or instructional procedures require a host of new decisions: Which materials or procedures will be applied to which children? Who will decide, and how?

3. More complex subdivisions of students raise problems of coordination: Who will assign students to their appropriate categories? When will a pupil be reassigned, and who will make sure that the reassignment does not create great discontinuity?

To deal with these changes, teachers must be equipped with more complex rules for decision making than formerly and must have some legitimation for their new responsibilities.

We could approach educational innovation as if it were a theoretical problem. But the wave of educational change has already passed. As we show in Chapter 2, very few elementary schools in our Bay Area sample simply and straightforwardly conform to what we have called the traditional model. Most of them incorporate, in some measure, some of the innovations we described. So in many respects our problem is not theoretical--it is empirical. How do the new instructional complexities we have described get absorbed by the school? What organizational changes do they produce? What organizational changes are required to support and maintain the complexity that has already been introduced into classrooms and schools?

Theoretical Foundation of the Study

We approach this educational problem with propositions drawn from the sociology of formal organizations and of education. This formulation suggests that the structure of organizations is highly contingent

on the nature of the technology employed. Put simply, technology is the set of materials, procedures, and activities through which the organization tries to accomplish its central purpose. In school classrooms the technology is the curriculum, instructional methods, teaching techniques, and materials--all of which are aimed at producing cognitive or affective changes in students. Technologies range from simple to complex, but as we have suggested, the trend in education has been to increase the complexity of instructional technology and of other classroom characteristics.

Definitions of Complexity

We are interested in the relationships between school structure and instructional technology. Both of these aspects of school organization vary in their complexity. Thus, the terms school structural (or organizational) complexity and technological (or instructional) complexity run through this report. We define them here, and further on propose specific empirical indicators.

By the structural complexity of a school or classroom we mean the number of different hierarchical or collaborative relationships among the staff that are built into the organization. The simplest school organization ordinarily found consists of a principal and some teachers who work separately. Greater complexity is found when teachers work together on committees to make some collective decisions. Still greater complexity is found when collaborative work relationships exist: (a) when teachers plan instruction and teach groups of students jointly, (b) when teachers work routinely and regularly with specialists from the school or district office, or (c) when teachers regularly teach with aides or volunteers. The greater the degree of organizational interdependence found within a staff, the greater the complexity. In the most complex school organization, teachers are in daily (or even hourly) interdependent relationships with each other, the principal, specialists, and aides or volunteers. In such a situation, the number of regular, formal work relationships in the school can become astronomical.

By technological complexity we mean the number of structured teaching decisions that are routinely made about the work and progress of the students. In technologically simple schools the children are grouped by age into classes. The students in each class cover a standard series of topics, each working on the same materials at the same time in the same sequence and at the same pace. Relatively few teaching decisions need to be made in such a work system. Greater complexity is found (a) when children are grouped differently in different subjects and can be shifted among groups; (b) when different groups or individual students work on different subjects or study subjects at different times; (c) when different groups or individuals work with different materials, or with materials or topics in different sequences or at different rates; or (d) when the materials or tasks the students work on themselves provide choices about which lines of activity are to be followed. All of these kinds of situations involve more complexity in teaching work: decisions must be made about who is to do what next. For better or worse, different students will be assigned to different activities. The decisions involved may or may not be good ones, but someone must make, and coordinate, them.

The reading program in grades 1-3 was chosen as a focal point for our inquiries about instructional complexity. The main reason for selecting reading was that it is a core subject to which much attention is devoted both inside and outside the school: reading test scores are used in evaluating schools, principals, teachers, and students. Reading competence is also the target of many professionally and commercially sponsored curricular programs and technical innovations.

Hypotheses

If staffing arrangements are more differentiated and complex, it should, we assumed, be easier for a school to arrange and support more complex instruction. It seems obvious that complexity should generate complexity. The kinds of schools and classrooms which generate or adopt complex methods of instruction and complex sets of materials should be structures which are themselves complex. Further, if complex

curricula are adopted, they seem more likely to survive in classrooms and schools which organize their staffing in ways that are complex enough to do the work successfully. Thus,

> Proposition 1: More complex structures in schools and classrooms lead to the adoption and retention of more complex curricula, materials, and methods.

Theoretically, this relationship goes both ways. Thus,

> Proposition 2: More complex classroom curricula, materials, and methods produce more complex and differentiated patterns of school and classroom organization.

But the classroom is not an isolated unit. It acquires capacities and limitations because of its location in the larger structure of the school. The organization of the school may limit the possibilities for development in particular classrooms, or may force changes in classrooms. Such contingencies were noted in Propositions 1 and 2, but they can be stated explicitly:

> Proposition 3A: The complexity and resources of the school affect the complexity of the staffing and work of the classroom.

This idea captures simply the "ladder" property of school systems. The classroom derives some of its capacities from the larger unit of which it is a part. For instance, put concretely, a school principal with greater capacity for organizational integration and support creates more possible lines of action and decision for the teachers than might otherwise be the case.

The same point can be made about the relation the next step up the ladder--between the district and the school:

> Proposition 3B: Districts with more complexity and resources increase the complexity of their schools and classrooms.

Resources may mean money or organizational capacity to encourage and sustain innovations of various kinds.

Method

The nature of the problem we are studying demands a complex research design, a large sample of school districts, schools, and classrooms (with respondents from each of the three levels), diverse methods, including questionnaires, interviews, observations, and highly sophisticated field procedures. Each of these is described fully in this section.

The Research Design

Our study is a panel study. The theoretically possible two-way causal relationships between organization and instruction, and our interest in going beyond correlational evidence, encouraged us to gather data twice and compare them. Consequently, we obtained information from schools in the spring of 1973; and we are presently analyzing data from the second cycle, completed in the spring of 1975.

Our design required information from each stratum of school organization. Superintendents, principals, and teachers completed questionnaires asking them to describe organizational patterns at their respective levels and to describe various instructional practices in mathematics, social studies, and, particularly, reading. At the district and school levels, the instructional queries were more general. For example, whereas we asked teachers to describe their own approaches to instruction, we asked the principal to describe typical practices in the school and narrowed the focus to instruction in reading. The superintendent was asked to provide information about district curriculum and instructional policies. At the classroom level the teacher questionnaire was supplemented by actual observations in a subset of classrooms.

This report is based on a preliminary analysis of information obtained in the first wave of the longitudinal study. As a result of this analysis, the scope of our research has widened, and we have identified areas where our study probes more deeply. Specifically, we are exploring in the second wave analysis (a) the structural looseness

of schools in the area of instruction as well as other areas where the levels of school organizations may be more tightly coupled, (b) the relationship between schools and their community environments, and (c) the ways in which individual teachers manage and coordinate instructional activities within the classroom.

The second wave of the study mainly replicates the research activities of the first with the same sample of schools. Comparing the two sets of information will help us identify the direction of causality between organizational patterns in schools and the instructional activities of the classroom.

The Sample

Our research design required a sample consisting of randomly selected school districts and schools. We obtained a stratified random sample of school districts in six counties of the San Francisco Bay Area. The districts were selected from four size categories: large (25 or more elementary schools), medium-large (15 to 24 elementary schools), medium (7 to 14 elementary schools), and small (1 to 6 elementary schools). From each of the size categories a different proportion of districts was drawn. In the large districts category, for example, all the districts in the six-county region were selected; whereas, in the small districts category only 19 percent were selected.

Within districts, elementary schools were also randomly selected. The proportion of schools selected varied with district size. In small districts, for example, all the elementary schools were selected; in large districts, 19 percent of the district's elementary schools were selected.

The sampling procedure originally yielded 35 school districts and 200 elementary schools. All but one district agreed to participate in the two-year study. Within districts, 10 percent of the schools selected initially refused to participate, but these were replaced by selecting randomly identified alternate schools from the same district. The final sample consists of 34 school districts and 188 elementary schools. The distribution of these by size is shown in Table 1.1.

TABLE 1.1

Number of Districts and Schools in Sample
by District Size

	Small	Medium	Medium-Large	Large
Districts	10	11	6	7
Schools	22	57	38	71

Other characteristics of the districts and schools are discussed in Chapter 2.

The subset of schools selected from the larger sample for more intensive study was not selected randomly. Here our intent was to look at the various combinations of the two research categories--organization and instruction. Therefore, on the basis of an initial analysis of the organizational and instructional patterns in the 188 schools, we selected 16 schools that represented various organizational and instructional types. Some of these were schools with a large number of teacher teams; some had both specialists and teams; some had neither. For each of these organizational types, we selected schools that had either highly complex or quite traditional patterns of instruction. Because of our special interest in teaching teams, we included more team schools than non-team schools. The distribution of the 16 schools selected for intensive study can be seen in Table 1.2.

Subsamples of schools for two additional studies were selected from these 16 schools. One of these studies looked at the relationship between classroom organization and students' perceptions of their academic abilities and their satisfaction with school. The other study focused on actual grouping and instructional practices in classrooms; observers scored classroom sessions in reading, math, and social studies. (The results of the student study and observations are discussed in Chapter 8.) The seven schools in which classrooms were

TABLE 1.2

Distribution of Schools Selected for Intensive Study, by Organizational and Instructional Type

Organizational Pattern	Instructional Pattern	
	Complex	Simple
Team and specialists	3	---[a]
Teams	3	2
Specialists	2	2
Conventional	2	2

[a]We were unable to find schools with both teams and specialists that reported simple instructional programs.

observed were selected because they were the purest example of each possible organizational and instructional type. The six schools in the student study were chosen on the basis of type and urban location.

Respondents. We selected respondents from among superintendents, principals, and teachers. And, in an exploratory attempt to link classroom organization to student outcomes, we also gathered information from students.

In each of the 34 school districts, the superintendent, the associate superintendent, or the top line officer for elementary education in the district completed a questionnaire and was interviewed by a member of our research staff.

In each of the 188 elementary schools, the principal completed a questionnaire and was interviewed by a member of the research staff.

In each of the 16 schools chosen for intensive study, every teacher completed a questionnaire. Two hundred and thirty-two questionnaires were returned (the refusal rate was less than five percent). In seven of the schools, 50 classrooms were observed three times, one

observation each for reading, math, and social studies. In 17 classrooms selected from six of the schools, 334 third graders completed questionnaires. Teachers from these classrooms provided additional information about their ratings of students. Additional information for students was obtained from school records.

The Instruments

The instruments used in the study were developed by the staff of the Environment for Teaching Program. All underwent extensive field testing prior to their use. The instruments are listed and described briefly below. At each level, comparable items were included, both for validity purposes and for various interlevel comparisons.

District Level	
Superintendent Questionnaire:	Obtains basic data about district finances and personnel, and other descriptive information
Focused Interview:	Taps superintendent's perceptions of district's organizational and instructional patterns
School Level	
Principal Questionnaire:	Obtains information about school finances and personnel, and other descriptive information
Focused Interview:	Taps principal's perceptions of various organizational and instructional patterns and processes in the school
Classroom Level	
Teacher Questionnaire:	Taps teacher's perceptions of organization at the school and classroom level, and inquires extensively into specific classroom practices
Classroom Observation:	Measures instructional differentiation, grouping, and aspects of student and teacher behavior in the classroom

Student Questionnaire: Measures student's perceptions of ability and attitudes toward school

Field Procedures

Schools are becoming more reluctant than ever to cooperate with researchers. Consequently, we were forced to use more highly sophisticated procedures than are normally employed in studies of this type. Our high response rates, we think, confirm the success of these vigorous efforts.

At the district level, we visited each superintendent to describe the study and to ask personally for the district's cooperation in the study. Our visit was preceded by a letter from the Association of California School Administrators (ACSA) endorsing the study and asking for cooperation. In some districts we were asked to write a letter to the board of education; in others we were asked to make our request directly to the superintendent's council or cabinet.

At the school level, we wrote a personal letter to each principal requesting his or her cooperation. This letter was preceded by a letter from ACSA. In some cases, a presentation to the council of district principals occurred prior to the letter. A member of our research staff followed the letter with a telephone call requesting cooperation and setting an interview time. If a principal refused to participate, one additional call was made by the project coordinators to ask the reason.

After selecting schools for intensive study, we asked the principal to identify a teacher to come to the Stanford Center. The purpose of this visit was to outline the study, and to establish tentative field procedures for the site. The group of teachers was formally designated an Advisory Group; each teacher was designated a liaison. The liaison teacher worked closely with a research assistant from the Environment for Teaching Program, one of whom was assigned to each school. The teachers returned to the school to confirm the research plans with the staff and principal. These plans varied from school to school. In some, the liaison teacher took total responsibility for

explaining the study and distributing and collecting the teacher questionnaire. In others, the research assistant and teacher shared these responsibilities. The observations and student research were also coordinated by the liaison teacher.

The liaison teachers and the administrators in the sample have returned to Stanford from time to time to assist us with interpreting information not connected with the central hypothesis, which is being tested longitudinally. Our field procedures have thus become an integral part of our research, a technique we feel has contributed to the substance of our inquiry.

Scope and Structure of the Report

This report is more tentative than most reports of field studies. We report now on the first wave of a panel study designed to study the causal interrelations among some of the variables discussed above. However, this first wave provided a great deal of information on the issues with which we are concerned.

The report addresses four major questions. First, to what extent do more complex organizational structures in schools and classrooms create (or maintain) more complex instructional processes? Second, to what extent do the adoption and retention of more complex curricula and instructional methods tend to produce more complex structures of staff organization in schools and classrooms? Third, to what extent does the maintenance of curricular and staffing complexity in the classroom depend on organizational characteristics of the larger units --schools and districts--of which the classroom is a part?

The fourth question is a more general one: What is the nature of the overall links between classrooms, schools, and districts as organizational structures? There is a consensus in the literature on the sociology of educational organizations that educational systems are odd kinds of formal organizations--in part bureaucratic, in part professional, and in very large part so decentralized as to be barely organized at all. In our attempts to answer the first three questions

above, the fourth, or metaquestion continually arises: What is the nature of the kind of organization we are studying?

This report does not attempt a high level of integration. The four questions guided most of our work, but we proceeded in our several directions in the peculiar interdependent fashion of the Environment for Teaching Program. Consequently, our guiding questions do not constitute a rigorous conceptualization, but they do provide a framework for the remainder of the report.

Chapter 2, "Variety and Complexity in Bay Area Schools," is a descriptive chapter. It describes the organizational and instructional characteristics of the school districts, schools, and classrooms in our sample. Its main intent is to show that, in our sample at least, the past characterization of schools as tradition-bound and uniform applies today to only a small number of schools.

Chapter 3, "Organizational Support for Classroom Complexity from Districts and Schools," attempts to show our findings on Proposition 3--the effects of organizational features of district and school on classroom complexity. A number of findings are described, but more questions are raised than answered.

Chapter 4, "Organizational Support for Instruction at the Classroom Level," describes the connections between classroom structure and instructional technology. We attempt to see the extent to which Propositions 1 and 2, which suggest close linkages, merit support and further research.

Chapter 5, "The Staffing Structure of Districts and Schools," describes particularly the structural characteristics of schools and school districts in the sample. It further relates and compares some distinctive features of these organizations to findings in other types of formal organizational structures.

Chapter 6, "The Degree of Linkage between District, School, and Classroom," attacks directly the idea we formulated later in our research--the assertion (as Proposition 4) that linkages between district, school, and classroom are extremely weak. We present this idea,

not as an attempt to criticize the organization of school systems, but in an attempt to understand it.

Chapter 7, "Organizational Support for the Teacher's Role," explores the relationship between organizational patterns and the teacher's satisfaction with the school, paying special attention to the effects of school and classroom structure on this variable.

Finally, Chapter 8, "Student Job Satisfaction," takes an approach comparable to that in Chapter 7, but instead of focusing on teacher morale, looks at pupil satisfaction with the school. In an interesting switch from other student outcome studies, the student's role in school is treated as that of a "worker." The central question is, How is the job of student affected by individual and organizational circumstances?

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CHAPTER 2

VARIETY AND COMPLEXITY IN BAY AREA SCHOOLS

In Chapter 1 we outlined the intention of this study to focus on the linkage between school structure and instructional programs. Inherent in this choice is the assumption that schools and districts vary in structure and instructional practice. This assumption is what we examine in this chapter. Specifically, we attempt to address two questions: How are schools and districts organized in the Bay Area?, and How different is one school from another? We focus on selected variables in the external context of schools (the influence of teachers' organizations, school design, and external funding), in school structure (staffing), and in instructional practice (technological indicators as reported by principals). Some of these variables will recur in other chapters of this report, discussed in more detail; the main purpose of this chapter is to paint the background of a picture of the schools in the Bay Area that were in our sample.

The question whether schools vary in organization and instructional practice can be easily answered: they do vary. Half of the principals in our sample (total N=188) reported the presence of one or more open space pods or other instructional spaces where two or more teachers regularly work at the same time; 15 percent reported three or more such areas; and 39 percent reported that the amount of such space increased between 1971 and 1973. Expenditure-per-student ranged from $719 to $1,517. Seventy-nine percent of the principals reported that some of their teachers were engaged in some form of collaborative teaching activity; the proportion and type of collaboration varied. Four percent of the principals reported that reading instruction in grades 1-3 (the area we have emphasized) is generally carried out in the traditional manner, i.e., all students use the same materials; at the other extreme, seven percent reported at least some individualized reading instruction.

This chapter was written by Jo-Ann K. Intili.

These findings seem to contradict Adams and Biddle (1970)--that is, all schools do not look alike. Furthermore, in the typical classroom of the Bay Area, children are engaged in different activities rather than attending uniformly to a teacher-dominated discourse. Clearly Mort's prediction of slow innovation in education has not been borne out (Mort, 1941). School superintendents, principals, and teachers find themselves in a climate that favors organizational and instructional change. This chapter depicts some of the characteristics of schools as we found them.

Districts

The districts in our sample vary widely in size, financial status, and staffing characteristics. We surveyed 34 districts in six counties. Eleven percent of these districts are in city centers; they include 23 percent of the 188 schools in the sample. The size of the districts ranges from one school to 133 schools.

Financial Condition of Districts

Even in the small region encompassed by our research, we found wide variability in expenditures per student and in other measures of district wealth. The average expenditure was $986 per student[1] (compared with the national average of $858 reported in the 1972 Statistical Abstract of the United States); the lowest figure in our sample, $719, is substantially lower, and the highest, $1,517, is among the highest in the nation. Financial status was related to district size in our sample. Districts with 25 or more schools were especially likely to be in the highest budget category: 55 percent of these larger districts budgeted $971 or more per average daily attendance, compared with 27 percent of the medium-sized districts and 27 percent of the smaller districts (six or fewer schools).

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[1]Measured in average daily attendance (ADA).

The median district in our sample had between 15 and 25 percent nonwhite students; the range was from less than five percent to more than 75 percent. Surprisingly, districts with a higher percentage of nonwhite pupils in the population served were characterized by higher levels of expenditure per student. This relation is apparently due to the compensatory effect of federal and state funding, which is directed disproportionately to urban districts serving large minority populations. External funding was found to correlate .78 with district size, .60 with district minority population, and .54 with urban location. Some notion of the variation in the amounts of federal and state funding for reading programs may be of interest because of the implications for external pressures on the school. Table 2.1 shows external funds for reading reported by schools in small, medium, and large districts. The average amount of outside funds was $47,000. The range was from nothing to more than a million dollars.

TABLE 2.1

External Funding for Reading, by District Size

	Districts		
External Reading Funds	Small (1-6 schools)	Medium (7-24 schools)	Large (25 or more schools)
$0 - $ 49,999	5	1	1
$50,000 - $199,999	1	7	1
$200,000 and over	1	3	9

From the superintendents' reports of the number of schools directly benefiting from state or federal funds, we calculated the percentage of schools benefiting from these external funds in relation to size of district. As shown in Table 2.2, in the large districts

the benefits tended to be concentrated in a few schools, and in the small districts they tended to be dispersed to more schools. Thus, half of the small districts, but less than one-fifth of the large districts, distributed funds to more than 45 percent of their schools.

TABLE 2.2

Percentage of Schools Receiving External Funding for Reading, by District Size

Schools Benefiting from External Funds	Districts		
	Small (1-6 schools)	Medium (7-24 schools)	Large (25 or more schools)
Less than 20%	0	2	6
20% - 30%	2	2	3
31% - 45%	1	5	0
More than 45%	3	2	2

District Staffing Characteristics of Districts

The median number of full-time district staff members who were involved in any way with elementary education typically was around 18,[2] with a range of two to more than 170. The composition of the staff is perhaps of equal interest.

We distinguished among the following categories of persons working at the district level:

General administration. The chief administrative officers of the district--the superintendent and his/her chief assistants or associates in charge of elementary teaching personnel or business.

Special administration. Other district level administrators who have supervisory responsibility for such areas as guidance, multicultural education, curriculum, community relations, coordination of personnel in subject matter areas, etc.

[2]Full-time-equivalent positions (FTEs) are computations based on the proportion of one person working 40 hours a week on tasks related in some way to elementary education.

Specialists working directly with students. Counselors, attendance personnel.

Specialists who do not work directly with students. Psychometrists, accountants, curriculum specialists, etc.

District teachers. Music or special education teachers who provide services to more than one school.

All districts had general administrators, but two had less than one full-time general administrator concerned with elementary instruction. About half (16) did not have a full-time nonsupervisory, non-instructional staff concerned with elementary education. Twenty-seven percent did not have a full-time special teacher at the district level involved in elementary education. These figures vary with size of district, wealth, and other factors (see Chapter 5).

Teachers' Organizations

School district decision making is affected not only by financial and staffing pressures. There is also the pressure from teachers' organizations. Superintendents were asked to indicate the extent of influence of teachers' organizations in their districts. As Table 2.3 shows, their influence varies by issue.

TABLE 2.3

Influence of Teachers' Organizations, as Reported by Superintendents
(Percentage of Superintendents Reporting)

Areas of Influence	None	Slight	Moderate	High	Extensive
Salary and benefits	9 (3)	3 (1)	24 (8)	44 (15)	21 (7)
Teaching conditions	21 (7)	24 (8)	29 (10)	24 (8)	-0-
Curriculum activities	29 (10)	21 (7)	32 (11)	18 (6)	-0-
Staffing assignments	41 (14)	29 (10)	18 (6)	12 (4)	-0-
Pupil grouping	53 (18)	24 (8)	12 (4)	12 (4)	-0-

Note: Numbers in parentheses = N.

Not surprisingly, teachers' organizations exert the most pressure on salaries and benefits. Teaching conditions and curriculum come next; only 29 percent of the superintendents reported at least moderate pressure on staffing assignments. (We also asked superintendents about the influence of parent groups on decision making. Most said there was little. Twenty superintendents reported that parents had moderate or less influence on decision making and planning.)

Thus, in size, finances, and staffing (as well as in the interrelationships among these variables), there was a great deal of variation among districts. Schools likewise show tremendous variation.

Schools and Classrooms

Variation in School Staffing

School size in our sample ranged from schools with fewer than 30 students to some with more than a thousand. The mean size is 560 students and the mean proportion of nonwhite students per school is 20 to 30 percent. The range of nonwhite student population is from less than five percent to more than 90 percent. Most schools have one administrator, but 17 percent have more than one, and 12 percent have only a part-time principal. Only 12 percent do not have special teachers, such as those working with the mentally gifted or with remedial reading, based at the school. Fifty percent do not have specialists such as psychologists, counselors, and curriculum specialists based at the school. Seventy percent have paid aides, but fewer than a third report more than two full-time paid aides. Ninety-seven percent have volunteers working one to three hours a day; 25 percent have more than 15 volunteers working at least part-time. This picture of staffing upsets the traditional view of the school as a place that houses two distinct groups: teachers and students. In fact, there seems to be a wide variety of staff available and working in the schools.

Several other current beliefs circulated about the schools are also put in doubt by our data: "Specialists are not used," "Teaming is passé," "In-service training is rare." Although most specialists are not assigned to one school, 52 percent of the principals reported daily teacher-specialist interaction. Seventy-nine percent of the principals reported that some of their teachers collaborated, and most of those (73 percent) indicate that teaming increased between 1971 and 1973. And 79 percent of the principals reported some form of in-service training in the use of materials.

Thus, there is not only variation, but a high degree of innovation. What remains is to examine exactly what is occurring. What types of instructional practices are followed? For example, given a school that reportedly has teaming, the proportion of teachers involved in teaming varies from less than 10 percent to all the teachers in the school (in teams of from two to seven members). Do they simply plan together or actually teach together? The most typical form of in-service training seems to be short-term workshops: 58 percent of the principals reported their use (as opposed to long-term or ongoing in-service training).

Variation in Instructional Practices

There is a tremendous variety of practices within schools with regard to the "technology" of reading. How many types of materials are used, the extent to which the program is individualized or differentiated by type of student, the amount of autonomy afforded the individual pupil--these and many other features of the reading program were found to vary enormously among the schools in our sample. Table 2.4 summarizes the wide variation we found among reading programs.

Within the province of reading in the classroom, the principals described variation among schools in types of staffing patterns and working relationships (see Table 2.5).

TABLE 2.4

Variations among Schools in Reading Programs

Program Characteristics	Percentage of Principals' Responses (N=188)
a) Typical student grouping:	
All use same materials	4%
2 or 3 groups, different materials	47
4 or more groups, different materials	43
Individualized	7
b) Reading program is integrated with other subjects	25
Reading is concentrated in 1 or 2 periods daily	75
c) Major changes in reading program in last 2 years	50
d) One or more classrooms in which students have high autonomy	27
e) One or more classes in which students work independently	62
f) Great variation between classes in both methods and materials	32
Great variation in methods only	42
Great variation in materials only	8
No within-school variation in methods or materials	17
g) Changes in reading group membership	
Seldom	9
Occasionally	76
Fairly often	15
h) Number of different materials (not equipment) used in the school	
1-3 sets of materials	24
4-6 sets	52
7+ sets	24
i) Proportion of sets of materials that are state texts:	
30% or less	34
31% to 60%	44
more than 60%	22

TABLE 2.4 (Continued)

Program Characteristics	Percentage of Principals' Responses (N=188)
j) Use of highly programmed sets (i.e., highly sequenced, with the answers in back)	
none are used	22 %
1-4 are used	78
k) Use of sets targeting one ability level for help:	
none are used	69
1-3 are used	31
l) Use of sets emphasizing the phonetic approach to reading:	
none are used	0
a few are used	0

TABLE 2.5

Variation in Classroom Staffing for Reading

Staffing Patterns	Percentage of Principals' Responses (N=188)
Some teachers organized in teams	73%
At least one team in which teachers teach different grade levels	30
One or more multigraded or ungraded classrooms	61
Teachers in grades 1-3 jointly decide on reading materials	50
Teachers in grades 1-3 jointly decide on methods to be used for reading	9
Some training provided for reading material usage	79
1 or more paid aides in the typical reading classroom	29
1 or more adult volunteers in the typical reading classroom	58
Fewer than 15 students in the typical reading classroom	54

While these data would make it appear that there is a great deal of collaboration among staff members within classrooms, we should not too quickly conclude that the staff organization at this level is highly complex and interdependent. Rather, the indications are that collaboration tends to be superficial and is perhaps not as pervasive as might appear to be the case from these data. When we sharpened the meaning of "teaming" by asking principals what proportion of their teachers assumed collective responsibility for a group of pupils or jointly taught the same lesson to a group of pupils, only one-quarter of them reported that as many as a third of their teaching staff were engaged in collaboration to that degree.

It is clear from the foregoing that schools vary widely in the complexity of their instructional programs and staffing. This variation is illustrated by the results of an index we devised to measure the differentiation of the reading program (this index is described in Chapter 3). We picked the 10 schools that scored highest on the index and compared them to the 10 schools that scored lowest. These schools are described below in terms of certain technological and structural variables.

Schools scoring high on differentiation of the reading program were likely to staff their reading classes with at least two adults and three student tutors for an average of 15 students. The students in this type of program were usually grouped into four or more subgroups or handled by an individualized instructional program. Teachers and students in programs of high complexity could choose from several sets of materials, and the school or district provided special training in their use. The materials were not likely to stress the phonetic approach or to be aimed at one particular ability level. Reading instruction was integrated with other subject areas rather than concentrated in special time periods, and teachers in the reading program tended to meet frequently with others within and across grade levels.

Schools scoring low on differentiation of reading instruction typically employed only one adult to work with an average of 20 or

more students. Students were clustered into two or three groups and there were some alternative sets of materials available for the teachers to choose from. Materials were likely to be oriented toward phonetic skills and differentiated by ability level. Reading instruction was concentrated into one or two time periods; and teachers met only infrequently with their counterparts, whether at the same or different grade levels.

Organizational Influences on Instruction and Staffing

The instruction and staffing patterns of the reading program were minimally affected by district wealth (data not shown). Comparing schools from districts high and low on expenditure per pupil, we found some differences in the complexity of the reading curriculum (measured by the index of reading differentiation), but these differences were not as great as we expected, and we found no differences in the amount or types of teacher collaboration.

Open space architecture in the schools had, by contrast, a striking effect on both differentiation of the reading program and staffing patterns. Table 2.6 shows the effects on staffing more specifically:

TABLE 2.6

Staffing Patterns in Open Space and Conventional Schools, as Reported by Principals

Staffing Patterns	Schools with no open space pods (N=92)	Schools with 3 or more open space pods (N=92)
At least 60 percent of teachers in collaborative groups	26%	52%
Some joint teaching	32	82
Some collective responsibility	37	93
Some teachers in groups for reading classes	39	89
Some paid aides in the typical classroom	32	36

TABLE 2.6 (Continued)

Staffing Patterns	Schools with no open space pods (N=92)	Schools with 3 or more open space pods (N=92)
Some adult volunteers	56%	68%
Some student tutors	67	93
High percentage of school-level specialists	23	50
High percentage of district-level specialists	13	23

Finally, most principals in our sample supported the trend toward more collaboration among teachers. Not only did they believe collaboration should be increased, but 71 percent reported that they thought the atmosphere in their school encouraged teacher collaboration, and 10 percent reported that specific school policies supported cooperative teaching.

The chapters that follow will explore the relationship between technology and structure further and in greater detail.

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CHAPTER 3

ORGANIZATIONAL SUPPORT FOR CLASSROOM COMPLEXITY FROM DISTRICTS AND SCHOOLS

In this chapter we relate organizational characteristics at district and school levels to the technology of instruction and to the organization of teachers' work. We are interested primarily in recent developments that have increased the complexity of the classroom. These developments are often called educational innovations, and we occasionally use this term in a general way to encompass our two more specific interests: (a) the differentiation of reading instruction, and (b) the organization of teachers into small work groups to teach reading. We asked two basic questions:

1. What organizational features of schools or school districts are associated with instructional differentiation in reading?

2. What organizational features of schools or school districts predict the organization of teachers into collaborative work groups?

Thus we selected for analysis one aspect of classroom technological complexity and one aspect of classroom structural complexity. By technological complexity we mean the instructional arrangements that create large numbers of explicit decision points in teaching. The use of more differentiated reading materials, for example, requires that teachers make decisions about which students should work on which materials or which tasks at any given time--many more decisions than are necessary in classrooms in which all students work at the same pace on the same tasks. By structural complexity we mean classroom

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This chapter was written by Terrence E. Deal, John W. Meyer, and W. Richard Scott. It is based on "Organizational Support for Innovative Instructional Programs: District and School Levels," presented at the Annual Meeting of the American Educational Research Association, Chicago, April 1974.

arrangements that create frequent organizational interdependencies among staff members in the school. Collaborative teaching, which daily links each teacher's work with that of colleagues, is clearly such an arrangement; and in earlier research (Meyer & Cohen, 1971) we learned that teamed teachers are indeed involved in frequent work-related interaction with each other and with principals in their schools.

What factors in schools and districts might we expect to affect these indicators of classroom complexity? Our analyses were guided by the hypothesis that complexity in the classroom is aided by high levels of resources and by high levels of complexity in the wider systems of the school and district. Specifically, we had three suppositions. (1) We supposed that district financial resources, whether in the form of general expenditure levels or specific external funding programs, would positively affect both types of complexity. (2) We supposed that district organizational coordination and support (in the form of special administrators with responsibility for instruction, special district teachers with distinctive competencies, etc.) would positively affect both types of complexity. (3) We supposed that two types of organizational models of schools--the centralized model with a highly developed staff structure, and the decentralized professional model with highly developed principal and teacher decision making--would support more classroom complexity than traditional schools. Thus, we imagined that schools with more specialists' roles and schools with more active and influential principals and faculties would be able to support more complexity.

The pattern of our findings, though in some ways consistent with our expectations, raises a good many new questions. We found that a number of variables affected our complexity indicators in the ways we had expected, while others did not. But the overall structure of the findings leaves us with many questions about the validity of the line of thought on which we started out. We had supposed that the resources and complexity of the larger organizational context would in predictable and organized ways render the classroom more complex. We can

indeed make some predictions, but whether they reflect processes operating through formal organizational patterns is not clear.

In the pages that follow, we describe the independent variables and go through our findings in an empiricist's style. We report the factors which affect, and some which surprisingly do not affect, the dependent variables of interest. After presenting the raw findings, we try to relate them to our initial conceptions of organizational processes that diffuse or channel complexity from higher levels to the classroom.

Independent Variables

At the district level, the variables associated with the two areas of innovation include per student expenditure, external funding, special administration ratio, and size.[1] Per student expenditure is the total amount of district money spent on instruction, standardized by the districts' average daily attendance (ADA). External funding is the total amount of special state and federal assistance a district school receives for reading programs in grades 1-3. (Examples of this aid are state funds deriving from the California Miller-Unruh Act and federal Title I funds). The special administration ratio is the proportion of district administrative staff that is responsible for special areas such as guidance, special education, and coordination of personnel in special subject areas. District size is measured by the total number of schools in the district.

At the school level, the variables associated with complexity include three structural characteristics, principal leadership, the school's evaluation structure, and school size; open space, a measure of the school's architectural openness, and community climate, an indicator of the community's attitude toward education.

The indicator of principal leadership is an index based on a principal's report of his relative influence in several key decision

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[1]The measures of all the variables and the sources of information on each are in the Addendum at the end of this chapter.

areas and his perception of the amount of time he spent stimulating change in his school. The school's evaluation structure was also measured by an index built from the principal's report of how frequently he evaluated reading teachers in grades 1-3 and how frequently the school's reading program was evaluated. School size is the number of students enrolled in the school. The open space variable is based on the number (per school) of open space pods or instructional spaces where two or more teachers regularly work at the same time. The index of community climate asked the principal to choose one of three possible categories as characterizing the school's adult community: innovative, traditional, or mixed.

Dependent Variables

We are interested in explaining classroom complexity of two kinds: instructional complexity and complexity in the way teachers are organized for work. Complexity of both kinds is often called innovation because it represents a departure from more simple instructional practices and organizational patterns. Indeed, in this discussion we will often use the common-sense term "innovation" because of its wide acceptance among both field educators and educational researchers; but we want to stress that as we discuss "innovation" what we mean by the term is complexity.

In order to measure the complexity of classroom instruction, we constructed an index of the differentiation of reading instruction in the first three grades. This index is a combination of three components: (1) the number of distinct sets of reading materials the principal reports in use in more than half the classrooms in the first three grades, (2) the principal's response to three items typifying patterns of instruction, and (3) objective ratings of the reading materials currently in use in the early grades. The first component is self-explanatory. The second component included the principal's report of materials grouping (the extent to which all students used

the same materials), student pacing (the extent to which students worked at the same pace), and teacher choice (the amount of choice a teacher had in selecting materials for assignments). The third component--the objective ratings of reading sets--employed experts to rate the materials on two dimensions: the inclusion of phonetic concentration and the accommodation to varying ability levels. The ratings were dichotomized as "high" and "low"; the index used only the number of reading sets scoring "high." Each response and the two objective ratings were dichotomized, and a combined differentiation score was obtained by totaling the six items.

The corresponding measure of organizational complexity was an index of teacher collaboration--the percentage of first-, second-, and third-grade teachers in the school grouped into teams for reading. The principal was asked to identify collaborative teacher work groups in his school. He was then asked to indicate the number of teachers in each and to choose one of several criteria which most closely described the way the teachers in each group worked together (see Addendum). In order for teachers to be coded as a team, the principal had to report that they either planned together, taught together, or had collective responsibility for students. The index of teacher collaboration was obtained by dividing the number of teachers in groups meeting one of these three criteria by the total number of teachers in grades 1-3 in the school.

Results

Looked at superficially, the results of our cross-sectional analysis show schools to have considerable complexity in both reading instruction and teacher work arrangements. (As shown in Chapter 2, elementary schools in the Bay Area have clearly moved away from a pattern of self-contained classrooms where a single teacher, isolated from colleagues, teaches a group of thirty students the same lesson.) These results are not surprising. Miles (1964), Carlson (1965),

Havelock (1973), and others have found schools adopting a large number and wide variety of innovations. The educational climate both in school systems and in the general educational community appears to have moved from an inflexible interest in preserving the status quo to a commitment to introducing changes that make the classroom and instruction more complex.

We have already noted, however, that when a principal reports the adoption of an innovation, the change is not necessarily significant. For example, 73 percent of the principals in our sample reported having teaching teams in their schools. But when we inquired further into the way these teams functioned, we found that 70 percent of them functioned at a very low level of interdependence. Only 30 percent actually taught together or had joint responsibility for a single group of students.

Although simple measures of innovation suggest radical changes in the schools of the Bay Area, our more detailed inquiry reveals that few schools have truly been reconstituted in more complex ways. The detailed character of our measures therefore reveals lower levels of innovation than studies using checklists of innovations adopted at the district level have shown.

Our dependent measures tapped two important aspects of the total educational innovation reported by schools in our sample: instructional differentiation and teaming. We examined their relationship to district and school level organizational factors by using multiple regression analysis, which allowed us to enter several organizational factors simultaneously into an equation with either teaming or instructional differentiation and to look at the independent effects of each organizational factor when all others in the equation were held constant.

The results, in Table 3.1, show that per student expenditure, external funding, special administration ratio, and district size are significant district-level predictors of differentiated reading instruction. The first three characteristics affect instructional differentiation positively. Of these, per student expenditure shows

TABLE 3.1

Relationship of District and School Organizational Characteristics
to Instructional Differentiation and Teaming
(normalized regression coefficients)

	District Level (N=34)				School Level (N=188)					Total Variance Explained (R^2)
	Per St. Expend.	Ext. Fund.	Sp. Adm. Ratio	Dist. Size	Prin. Lead.	Eval. Struc.	Open Space	School Size	Comm. Clim.	
Differentiation of Reading Instruction	.27**	.22**	.17**	-.36**	.18**	.12**	.29**	-.19**	.02	.23
Teachers in Teams for Reading Instruction	.21**	-.07	.26**	.03	.15*	-.01	.30**	-.02	.15**	.23

** $p < .01$

the strongest effect. The special administration ratio has a weaker effect.[2] District size, on the other hand, negatively affects instructional differentiation and is the strongest predictor variable in the equation. When, in a separate analysis, we look at the correlates of size, size is related both to a district's urban location ($r = .60$) and to its minority population ($r = .47$); but even when we control for these two factors (not shown in Table 3.1), size has a significant negative relationship to differentiation. We will say more about this later.

At the school level, open space has the strongest independent effect on reading differentiation. Principal leadership and evaluation structure relate significantly to differentiation. The relationship of school size to differentiation is consistent with that of district size. At the school level, however, the relationship is not as substantial. The relationship of community climate to reading differentiation is not significant.

The pattern of relationships for teaming is different. Per student expenditure by districts shows a strong relationship to the principals' reports of the proportion of teachers grouped for teaching reading. However, the relationship is weaker for teaming than it was for differentiation. By contrast, the special administration ratio is now somewhat stronger than it was for differentiation. External funding does not show a significant relationship to teaming, nor does district size.

At the school level, open space and principal leadership predict teaming in about the same way they predicted reading differentiation. Community climate becomes a significant predictor of teaming. However, school evaluation structure and school size are not significant predictors; neither is related to teaming.

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[2]This is the only case in Table 3.1 where the introduction of additional variables has a substantial effect. When we include minority population and urban location in the equation, the special administration ratio becomes insignificant.

In summary, size of both schools and school districts appears to be a characteristic that constrains curricular innovation. On the other hand, per pupil expenditure (not shown on Table 3.1), and external funding, both of which are characteristics of districts in large urban areas (r = .27 and .22, respectively), appear as facilitating forces. A strong principal and a vital evaluation structure that permits frequent evaluation of both teachers and programs are features of a school that relate to instructional differentiation, but, as we will note later, the causal direction seems less clear than for the district-level variables. Open space schools, a phenomenon of suburban areas (r = .29), are likely to have reading programs that are differentiated.

Open space schools with strong principals in an innovative community climate are likely to have teachers organized in teams for reading. District wealth and special administrators also tend to have positive effects on the development of teachers' work groups.

Some Problems of Interpretation

The analysis of the district and school level factors that relate to our two measures of educational innovation or complexity presents a picture of misleading clarity. We are puzzled by the inconsistency of the results: they are different for teaming and differentiation. (Also, other organizational characteristics at both the school and district levels that are not related raise many questions about the ones that are. In the discussion below, we will comment on some of these problems, leaving aside school size because of its questionable validity.)[3]

We have displayed our results graphically in Figure 3.1. This visual representation of our data is also troubling, looked at from

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[3]We suspect that the relationship between school size and differentiation is artifactual, since in large schools the principal, our only source of information, might be further from the classroom and might therefore underestimate the number of materials used in a typical classroom. The differentiation index could be unduly sensitive to this bias.

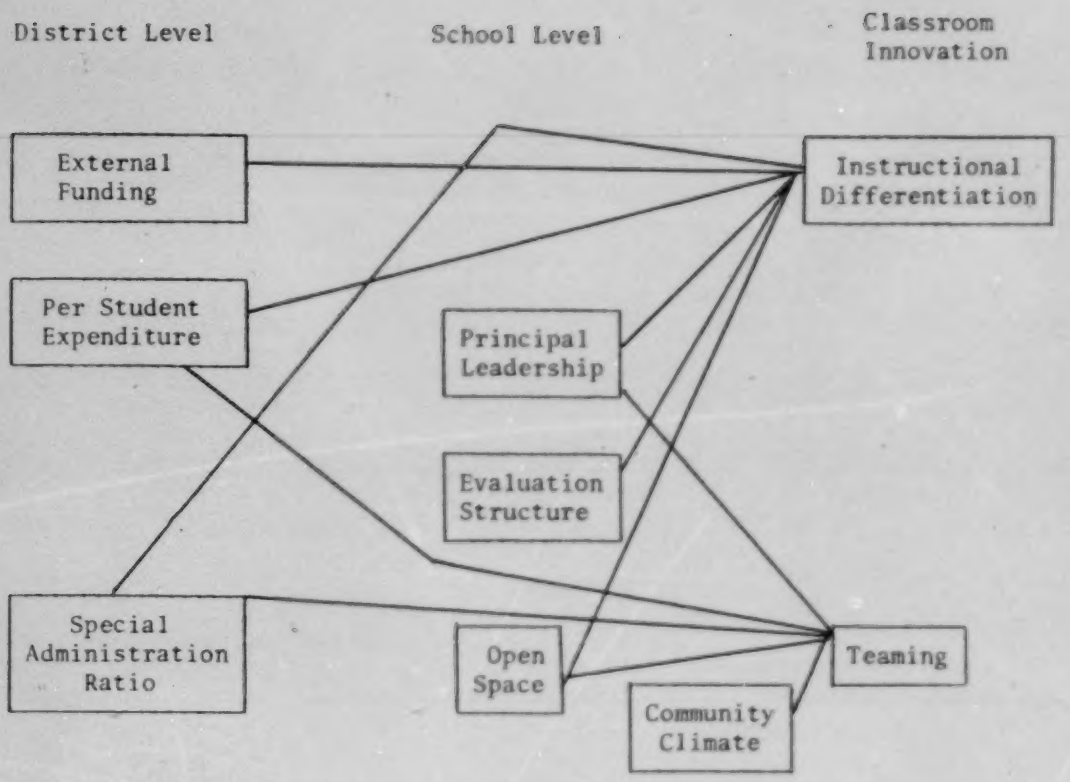

Fig. 3.1. Significant positive relationships between district and school level characteristics and classroom innovation.

our perspective on organizations. What is wrong with this picture?

To begin, teaming and differentiation are affected differently by special administration ratio, per student expenditure, and external funding, all aspects of district organization. Money and special administrators affect both measures of innovation; external funding affects only instructional differentiation. We are interested in these differences, but even more so in the formal patterns through which these organizational characteristics affect either kind of complexity.

We will look first at the special administration ratio. This factor is more strongly related to teaming than to instructional differentiation.[4] But what is the process through which special administrators at the district level affect either instructional differentiation or teaming? One obvious possibility is that these specialists create programs which create new patterns of instruction or work arrangements. If this were true we would expect that specialists from the district working in the schools and school-based specialists would have the same effect. Neither does. The lack of a similar positive relationship between these specialists and either differentiation or teaming diminishes the possibility that special administrators work through specialists stationed at the school. The possibility appears to be eliminated when we look at the relationship between these two specialist roles and the special administration ratio. The correlations from a separate analysis (not reported in this paper) are -.16 and .06, respectively. Another possible explanation is that special administrators influence instructional differentiation and teacher work arrangements through the principal. But such a relationship is ruled out by the correlation of -.12 between principal leadership and special administrators (see Table 3.2). Another link might be between the school evaluation structure and special administrators. But here the correlation is .08. And evaluation is not related to teaming, whereas special administrators are. We therefore have little faith that special administrators have an impact on instruction or teaming through evaluation.

Our final attempt to find the formal mechanism through which special administrators might work was to explore the possibility that through a network of policies and rules these administrators increase the complexity of work; but in a separate analysis we found that an

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[4] As we noted above, some of our analyses suggest that this variable does not have a significant impact on differentiation, although Table 3.1 presents the results of an analysis in which this effect occurs.

TABLE 3.2

Relationships among District and School Level Organizational Variables and Dependent Measures of Complexity

	Reading Instruc. Differentiation	Per Student Expenditure	External Funds	Special Admin. Ratio	Community Climate	District Size	Principal Leadership	School Evaluation Structure	Open Space	School Size	Teaming for Reading
Reading Instruction Differentiation	1.0	.17	-.05	.09	.07	-.07	.17	.17	.22	-.20	.19
Per Student Expenditure		1.00	.02	.08	.16	.36	.11	.10	-.24	-.26	.21
External Funds			1.00	.31	.07	.78	-.02	.10	-.05	.20	.02
Special Administration Ratio				1.00	.11	.28	-.12	.08	-.06	.23	.24
Community Climate					1.00	.13	.17	-.06	-.03	-.08	.23
District Size						1.00	.10	.18	-.12	.15	.11
Principal Leadership							1.00	.20	-.02	-.00	.16
School Evaluation Structure								1.00	.04	-.04	.06
Open Space									1.00	.16	.22
School Size										1.00	.01
Teaming for Reading Instruction											1.00

index of formalization based on the reported explicitness of district policy in the area of reading program adoption was not related to either differentiation or teaming. Our general interpretation is that special administrators, rather than operating through regular channels of authority, infuse their ideas into the general innovative climate in the district and influence the adoption of new instructional or organizational patterns through simple communication about new possibilities or through personal influence. Thus, the effect of special administrators seems idiosyncratic, not the result of their formal authority. Perhaps this is why the literature emphasizes the personal ability of such administrators to act as change agents.

External funding affects differentiation but does not influence the organization of teachers into groups for reading instruction.[5] Since many of the funds external to school districts have conditions attached, and since, in the case of Title I and Title II funds specifically, these conditions generally support diagnostic, prescriptive, and individualized instruction, it makes sense that external funds would increase instructional differentiation in the district. If the process through which these funds worked were clear-cut and bureaucratic, we would expect that external funds at the school level would also affect differentiation. This, however, is not the case, as measures of external funding at the school level are not related to the differentiation of reading instruction. It is therefore not at all clear how the presence of external funds at the district level affects reading instruction at the school level. In many cases, school-based specialists are funded by external funds, but as we have seen, these specialists in a school do not seem to increase instructional differentiation independently. We are therefore left with the question of precisely how external funding influences differentiation.

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[5]External funding correlates closely with district size (.78) and two other measures not discussed in this analysis: urban location (.54), and the district's minority population (.60). The effects of external funding may be inflated by these strong intercorrelations.

The relationship of money to both differentiation and teaming is the simplest to explain. High expenditure of dollars per pupil will buy more materials and should affect our differentiation index, since the index is based largely on instructional materials. It is also plausible that a high per student expenditure would increase the likelihood of teaming because money will buy released time, in-service training, and other resources that we know are necessary because of the increased coordination needs of more interdependent work structures. But the expenditure of money for innovation itself does not appear to be a highly organized process. We do not find any organizational links that would suggest how money systematically affects innovation.

At the school level, the relationships between organizational characteristics and innovation seem somewhat less ambiguous, although they still leave many questions unanswered. A principal's leadership, his influence, and the amount of time he reports spending on stimulating change are related to both differentiation and teaming. This relationship seems perfectly logical, although it should be noted that its effect is not large compared to that of other variables. We are also puzzled by the fact that, except for the weak relationship with community climate, none of our variables helps account for variation in principal leadership. The leadership factor itself seems weakly structured.

The school's evaluation structure is related to instructional differentiation, but not to teaming. The evaluation index is related to that of principal leadership ($r = .20$), a relationship we would expect, given the role of the principal as formal evaluator. However, we are not overwhelmed by the relative strength of this variable, nor are we certain of its causal direction. It seems as likely that highly differentiated instructional programs encourage more frequent evaluations as it does that well-developed evaluation structures make teachers more accessible and therefore lead to differentiation.

The school-level variable that consistently and significantly accounts for both teaming and differentiation is open space. Because

of our previous study of the impact of open space on teachers' perceptions of their work (Meyer & Cohen, 1971), we are persuaded that through various means open space has a significant effect on teachers' work arrangements. We expected that because of the greater student autonomy open space seems to encourage, these more flexible architectural arrangements would stimulate instructional differentiation. However, the factors that account for the construction of open space classrooms are historical and circumstantial, and we have not found evidence that school districts systematically adopt open space schools to promote curricular innovation.

Open space schools are a phenomenon of suburban areas ($r = .29$) where schools have been constructed within the last five years to keep up with rapidly expanding populations. The primary rationale for constructing open space schools is that they are cheaper and more flexible than conventional school buildings. In fact, there is a negative correlation (-.24) between district money and open space. We believe, therefore, that the effects of open space on instructional differentiation and teaming, while significant, are more a function of history and demographic factors than of a systematic organizational attempt on the part of school districts to alter the mode of instruction or the work relationships among teachers.

One final note on district size. Its significantly negative relationship to instructional differentiation in our analysis is highly inconsistent with previous studies of innovation (Baldridge & Burnham, 1973; Havelock, 1973). We will not attempt to reconcile the apparent inconsistency here, except to point out that these other studies asked for lists of innovations at the district level, a methodological approach that may have a bias for size, since districts with more schools are more likely to have at least <u>one</u> school with a given innovation. Because we measured innovation at the school level, we have considerable confidence in the relationship of size to innovation in our study.

Summary and Some Speculations

We set out initially to examine the relationship between school and district characteristics and the complexity of instruction and teachers' work at the classroom level. But as we examined the relationships between these three levels, we began to doubt that the linkage is essentially organizational in character. Rather, we found that district and school influences on innovation at the classroom level were not systematic. The linkages among these three levels were not what we would expect, given a formally coordinated organization. We also found that some of the variables showing the strongest relationship to our two measures of innovation were not organizational but historical and contextual.

We did find some evidence of central control and coordination at the district level. The district secures and stimulates the flow of money from local sources and from outside the district and hires special administrators who seem to encourage the innovation we examined at the classroom level. At the local school level, we found that a principal's strength and leadership stimulated differentiated instruction and the organization of teachers into small work groups. We also found evidence of community influence on teaming.

Overall, the classroom is affected somewhat by the characteristics of the higher organizational levels, or by sources of authority outside the bureaucratic structure, but is largely independent. The structural image of districts, schools, and classrooms emerging from our preliminary analysis is a series of loosely connected, autonomous units. In adopting new patterns of work or new instructional materials and techniques, the higher organizational levels do not control or coordinate the responses of the lower ones. Innovations do not appear to enter the school through formal organizational channels. Therefore, we are led to speculate that school organizations are segmented at two levels: schools are segmented within the district; classrooms are segmented within the schools. Each segment and level reacts to a highly innovative educational climate, selecting from this environment new and

more complex organizational and instructional forms without a center of coordination and control to make the selection systematic. This picture of school systems as highly segmented will be developed more intensively in Chapters 5 and 6.

What are the consequences of the segmented character of school organization? Although, in the prevailing educational climate, there will continue to be numerous changes in classroom organization and instruction, and although the higher levels may contribute ideas, and expand the educational horizons of participants at other levels, we have some doubt about the extent to which innovations will be supported or maintained if there are no formal, systematic linkages among the three levels of school organization.

We know, from the analysis of a small sample of classrooms in Chapter 4, that there is a fairly strong relationship between the organizational structure of the classroom and instruction. That analysis suggests that certain structures within teaching teams are related to aspects of instructional differentiation. However, when we look at our larger sample of elementary schools, we find that the correlation between instructional differentiation and teaming is only .19. This suggests that the two innovations are not being adopted simultaneously, although their relationship as indicated by Chapter 4 suggests that within the classroom one may require the other.

We believe that philosophical and cultural developments have contributed to a prevailing climate in education in which innovation is highly encouraged both by the educational research community and by the public. But the adoption of innovations has been largely unsystematic and uncoordinated, with the result that many innovations have not had the organizational support necessary to move them beyond the adoption stage to implementation and installation. When an innovation is in trouble, the prevailing response is to reject it and select another from the array available.

We do not mean to assign the major responsibility for this state of affairs to schools or to those who administer them. It is a

responsibility the educational research community shares; we have made it our business to develop new knowledge and products rather than to think about the conditions necessary to implement and support the knowledge and products we have or might have in the future.

At the end of our longitudinal study we hope to be able to see more clearly the causal linkages between school organization and the maintenance of innovations. If the speculations we make on the basis of this preliminary analysis are accurate, we would expect to find a difference between the structural factors that tended to predict educational change in the first wave (reported here) and the characteristics necessary to support, maintain, and successfully modify the newly adopted practices as measured in the second wave.

On the basis of our theories and this preliminary analysis, however, we would argue that the high turnover of innovations may be explained by the lack of necessary structural conditions in schools. To some extent the public and the educational community have discouraged such conditions by their emphasis on change for the sake of change. School systems appear to lack the authority to manage or coordinate complex instructional or organizational innovations at a higher level, perhaps owing to the bad light in which coordination and control are viewed in the present climate of innovation. But we argue that some organizational coordination and control may be necessary to support the more complex and sophisticated modifications in instruction and in the organization of work at the classroom level that the climate of innovation encourages.

The implications of this line of argument for schools runs somewhat counter to the recent emphasis on the creation of teacher centers or other structural modifications that encourage the dissemination of new educational practices. A segmented organization like that we have described is not likely to provide support for any complex system of instruction or teacher organization. Our advocacy of these linkages in no way implies that we favor elaborating school bureaucracies to reinforce the status quo. It does suggest that organizational change

comes hard, and that to survive, alterations in either instruction or organization must have the appropriate support from various levels in the organization. In the long run, it is this kind of knowledge about how to organize districts and schools for effective instruction that educators are seeking.

Addendum

Operational Measures of Variables

Variable	Measure	Source
DISTRICT LEVEL VARIABLES		
Per Student Expenditure	Total budget categories	California School District Financial Analysis--agency for research in education
District Size	Number of schools	California Public School Directory
External Funding	Amount schools receive in external reading funds 0 = none 1 = $1-19,999 2 = $20,000-39,999 3 = $40,000-49,999 4 = $50,000-79,999 5 = $80,000-199,999 6 = $200,000-499,999 7 = $500,000-999,999 8 = 1 million +	S.Q.[1]: Are there elementary schools in your district which currently receive special state or federal assistance for reading in grades 1 - 3 (like Miller-Unruh or Title I)?
Special Administration Ratio	Number of Special Administrators divided by Total District Staff (all active at district level)	S.Q.: Administrators with responsibilities for special areas like guidance, special education, multi-cultural education, community relations, or coordination of personnel in special subareas. Does not include people who do not supervise or evaluate other professional or certificated personnel.

[1]The abbreviation preceding the question refers to the instrument in which it was asked. There were four instruments:

S.Q.: Superintendent Questionnaire
S.I.: Superintendent Interview
P.Q.: Principal Questionnaire
P.I.: Principal Interview

Variable	Measure	Source
Formalization	Three-point scale: explicit, general, ad hoc.	S.I.: If a school wished to adopt a reading program, how explicit are district policies and procedures which the principal would follow in seeking approval?
ENVIRONMENTAL MEASURES		
Urban Location	Density of population in San Jose, San Francisco, Oakland, S. San Francisco equals urban	Consensus: The school districts were dichotomized based on information obtained from the census; consensus was obtained from 10 independent raters knowledgeable about the Bay Area.
Minority Population	Percent nonwhite students in district	California State Department of Education--Educational Statistics Department
SCHOOL-LEVEL VARIABLES		
Open Space	Number of open-space pods	P.I.: Does your school have any "open-space pods" or other instructional spaces where two or more teachers regularly work at the same time?
School Size	Total number of students enrolled	California State Department of Education, Educational Statistics Department--Racial and Ethnic Funding of California Public Schools

Variable	Measure	Source
School Specialists Based at School	Number of Specialist FTEs evaluated at school level	P.Q.: List certificated persons in your school, excluding regular teachers or teachers with special classes (evaluated and paid by district) based primarily at school.
School Specialists Based at District	Number of Specialist FTEs evaluated and paid at district level	P.Q.: List certificated persons in your school, excluding regular teachers or teachers with special classes (evaluated and paid by district) based at district primarily.
Evaluation Structure	Combination of two variables	P.I.: In general, how frequently do you evaluate how well or poorly teachers are doing on the task of teaching reading. (7-point scale: very frequently to never) P.I.: How often do you evaluate the success of the reading program in grades 1 - 3? (4-point scale: yearly to daily)
Principal Leadership	Combination of two variables	P.I.: Compared to all the other factors influencing the situation, how influential are you as principal? (5-point scale: not at all to extremely) P.I.: Rate yourself on a scale from one to five on how much time you are able to spend stimulating change within the school. (5-point scale: almost no time to a great deal of time)

Variable	Measure	Source
OPERATIONAL MEASURES OF INNOVATION		
Differentiation in Reading Instruction	Compilation of the following dichotomized variables:	
	Materials variation	P.I.: Number of sets of high phonetic concentration and number high ability concentration; obtained from a coding of the materials listed by the principal. The materials were rated by people knowledgeable in the field and consensus was obtained by 10 independent raters also knowledgeable about the materials.
		P.I.: During reading instruction in most classes in grades 1 - 3, how much variation is there in the materials used? (5-point scale from all use same to each uses different materials)
	Pacing	P.I.: Within most classes in grades 1 - 3, how do students generally work during reading instruction? (4-point scale from all work at the same pace to each works at his/her own pace)
	Teacher choice	P.I.: In your reading program for grades 1 - 3, how much choice do materials provide the teacher in assigning students' work? (3-point scale: few, some, and many)

Variable	Measure	Source
	Extensity of materials use	P.I.: Number of sets used in half or more of the classrooms obtained by comparing the number of classes listed for a set reported used to the total number of reading classes in grades 1 - 3 and then totaling for each school those sets used in more than half of the reported classes.
Grouping of Teachers for Reading Instruction (percentage in groups)	Number of teachers in groups for reading meeting criteria 1, 2, and 3, grades 1 - 3, divided by total number of reading teachers, grades 1 - 3	P.I.: Please tell me how many groups of teachers are in your school, how many teachers are in each group, and which of the following criteria they meet: 1. Meet and/or plan together at least once every other week. 2. Jointly teach same lesson to same group of pupils. 3. Are collectively responsible for group of students.

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CHAPTER 4

ORGANIZATIONAL SUPPORT FOR INSTRUCTION AT THE CLASSROOM LEVEL

With the incorporation of more complex instructional practices into the typical Bay Area classroom, has there arisen the need for more complex staffing patterns at the classroom level? Or, alternatively, has the introduction of more complex staffing patterns altered conceptions of teaching so that new instructional practices follow? In either case, we predicted, from the theoretical foundation underlying our study, an observable association between complexity in organizational structure and complexity of instruction. In Chapter 3 we examined the relationships between instructional complexity and patterns of organization at the levels of the district and the school. In this chapter we focus on the relationship of classroom staffing patterns to the complexity of instructional practice (again, what we call the technology of teaching). Using the data from a questionnaire administered to teachers in 16 of the 188 elementary schools in our study, we tested at the classroom level several propositions related to the central structure-technology hypothesis underlying our study. We predicted that:

> There is an association between more complex classroom or staff organization and more complex classroom technology.

We examine three distinct kinds of classroom staffing patterns: the traditionally isolated classroom teacher, the teacher assisted by the specialist or teaching aide, and the teaching team. We refer to

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This chapter was written by Elizabeth G. Cohen and Eric Bredo. It is based on "Organizational Support for Innovative Instructional Programs: Staff Level," presented at the Annual Meeting of the American Educational Research Association, Chicago, April 1974.

these three patterns as traditional, staff-line, and collaborative.

On the instructional (or technological) side we examine two dimensions of complexity. One of these is instructional differentiation, referring to the number and variety of classroom materials and groups of students. Conceptually, this first dimension is identical to the index of differentiation reported in Chapter 3. The other dimension is "nonroutinization" and refers to the timing and frequency of decisions teachers must make with respect to students and teaching materials. A nonroutinized teaching technology requires the teacher to use feedback from students during the course of instruction as a basis for decisions about instructional tasks.

We made the following predictions:

> Teaming is associated with more differentiated and nonroutinized instructional practice. The use of specialists is associated with more differentiated and nonroutinized instructional practice.

Carrying the analysis a step further, we divided teaching teams into those in which teachers work together with a relatively rigid division of labor and those that are more flexible. Generalizing from studies of division of labor in other types of organizations, we developed the following proposition:

> Teachers on teams in which there is a relatively rigid division of labor are likely to have routinized aspects of their tasks more fully than teachers on teams with more flexible roles.

These analytic distinctions are illustrated in Figure 4.1. For each pattern of staff organization we made predictions about the two dimensions of instructional complexity.

The first major section of this chapter describes the conceptualization leading to these specific predictions. Included in this section are the general characteristics of the subsample of schools and teachers. The second section presents the specific indices used to

Structure	Technology			
	Differentiation		Nonroutinization	
	High	Low	High	Low
Traditional		X		X
Collaborative Flexible Division of Labor	X		X	
Collaborative Rigid Division of Labor	X			X
Staff-Line	X		X	

Fig. 4.1. Predicted relationships between teacher work arrangements and two dimensions of technology. (A cell marked "X" indicates a prediction of greater frequency of cases at one end of the dimension.)

measure the concepts; and the third section defines the predictions operationally. The fourth section presents the results: both the analysis of the work arrangements of all the teachers in the sample and the analysis by aggregated team reports on division of labor. Finally, the last section presents the discussion and conclusions with special reference to implications for the second wave of this study.

Conceptualization

Structural Change: New Staffing Patterns

As we have seen in the previous chapters, there has been a marked change away from the traditional pattern of staff organization in schools. In many schools in our sample, teachers no longer work in isolation, each performing a separate task. To review some of the new patterns, principals frequently report collaborative relationships

between teachers; in addition, they often report the presence of non-teaching school specialists, such as special reading teachers, librarians, and school psychologists. Furthermore, in many of the schools, particularly those with external funding, there are paid teacher aides; and in some there are unpaid volunteers in the classroom.

In sociological terms, all of these changes may be viewed as changes in specialization or in the traditional division of labor. In organizational terms, specialists may be thought of as a staff complement to the line personnel, the teachers. Team teaching may represent a change in the division of labor and/or the task interdependence among teachers. Aides represent an increase in the number of line personnel per client (student) as well as the introduction of a hierarchical element into the teacher's role as he or she becomes an organizational superior to the aide. In sum, these changes indicate increased organizational complexity over the traditional pattern of staff utilization in schools. How does this organizational complexity relate conceptually to the instructional diversity we also see in Bay Area schools?

Structural and Technological Complexity

It is possible at the classroom level to test the prediction made at the other levels: i.e., that organizational and technological complexity will be positively associated. We are aware that some of the weakness of observed relationships in the general survey data may be due to inaccuracies in the principals' responses. At the teacher level, it is possible to reexamine more precisely the association of teaming, the use of specialists, and the presence of extra adults in the classroom with the instructional routinization (or nonroutinization) and differentiation--our two indicators of instructional complexity.

Technological Change: Differentiation and Routinization

Instructional practices currently considered innovative can vary immensely. Some of these are relatively simple; others are extremely complex. There are at least two dimensions on which the technology of

teaching might vary in complexity. One of these dimensions, differentiation, is the same as that used in Chapter 3 and refers to the extent to which instruction is organized so that teachers treat students differently. The other dimension, nonroutinization, is introduced now for the first time and refers more to the mode of teacher decision making than to the assignment of pupils and materials. Is the assignment discretionary, or are there rules that the teacher should follow in connecting pupils with learning activities? This dimension is an important indicator of instructional complexity, but in the analysis of principals' reports we were not successful in measuring the mode of teacher decision making, possibly because we did not construct good indicators and possibly because many principals do not have accurate knowledge of instruction not directly involving material resources.

As we originally conceptualized the problem, traditional instruction is at the low end of both dimensions of technological complexity. It is relatively undifferentiated because it tends to use "large batch processing" of pupils. As instructional practice becomes more differentiated, the teacher may vary the number of groups of children and the pacing and variety of materials for each group. At the highest level of differentiation we have what is known as "individualization" --i.e., each child works with materials suited to his own pace and learning style.

Traditional instruction also involves a routinized kind of decision making based on covering curriculum goals for each elementary grade in each subject. Children who cannot keep up with the traditionally prescribed pace are either left behind in the grade or accepted as failures on the grounds of their lack of ability. But traditional instruction is not the only kind of instruction to involve routinized decision making. Some highly innovative, highly differentiated programmed approaches contain built-in decisions about which lessons each child must use, given routine scoring of his past performance. In other words, the idea of differentiation is distinct from the mode of teacher decision making in assignment of students and materials.

Examples of nonroutinized instructional practice are "open" classrooms, where children are allowed to make their own decisions about learning tasks, and individualized programs, where reassignments are continually made on the basis of diagnoses of pupils' responses.

Modes of Team Organization and Nonroutinization of Instruction

The analysis of recent changes in school staffs in abstract organizational terms has also sharpened the way we look at teaching "teams." Years of study of teaching teams have taught us to be very cautious about concluding that we know what is meant when a principal or a teacher says that he has a "team." This group may be little different from a traditional teacher committee working on a curriculum project in a series of after-school meetings. Or the "team" may not meet at all. We are especially interested in collaborative teacher groups representing significant interdependence between teachers. We have defined this interdependence as working together on instructional planning, teaching, evaluation, or discipline.

Even if we restrict our examination to teams that are interdependent on one or more of these tasks, there remains critical variation between teams in the way they organize their work. Teachers on teams may divide their labor in relatively rigid ways--for example, specializing in the teaching of particular subjects ("turn teaching"), or teaching strictly preassigned groups of students. After a team working in this manner has made initial decisions on specialization and/or pupil assignment, the members' interdependence may be limited and they may meet infrequently. We have conceptualized such a team organization as having a relatively rigid division of labor.

In contrast to teams with this type of organization, some teams appear to work more flexibly, jointly teaching a single group of pupils. They may vary the assignment of tasks to team members according to the requirements of particular situations. We have characterized these teams as showing a relatively flexible division of labor.

The literature on organizations suggests that the more flexible division of labor is a necessity when the technology is complex, necessitating frequent feedback and continual decision making. Sociologists have suggested that rigid role prescriptions are more likely to be associated with more routine or certain tasks and flexible role prescriptions with less routine or uncertain tasks. March and Simon (1958), for instance, argue that relatively certain and stable tasks can be coordinated through structured means (e.g., rules, schedules, plans), whereas uncertain tasks require more immediate verbal communication to effect coordination. Similarly, Burns and Stalker's (1961) study of organizational innovation suggests that a "mechanistic" form of organization with considerable division of labor is most appropriate under stable conditions, but that an "organic" form with more flexible roles is suitable when there is a high rate of innovation, that is, when tasks change rapidly. Perrow (1970) has also argued that nonroutine tasks will be associated with a less rigid and tightly prescribed division of labor.

The Subsample

The data analyzed in this chapter come from teacher questionnaires administered in 16 elementary schools in the Bay Area. (As described in Chapter 1, principals of 188 elementary schools were interviewed as part of a large general survey. In 16 of these schools teachers were requested to fill out questionnaires.) The schools selected for the teacher questionnaires represent a deliberately nonrandom sample; the selection was made on the basis of the principals' responses to the general survey questionnaire. Schools were selected on a controlled comparison basis in order to maximize variation in organizational variables such as teaming and the use of specialists, and to maximize variation in instructional complexity. We selected schools where, according to the principals, there was one of the following staff patterns: (1) no teams or specialists, (2) teams but few specialists,

(3) specialists but few teams, (4) both teams and specialists. For each of these four patterns we also selected schools with both simple and complex instructional practices (again according to principals' reports).

This sampling plan was limited by the nonoccurrence of some combinations in our large random sample and by the crude nature of the process for selecting schools on the basis of their technology before the more refined index reported in Chapter 3 was devised.

Response to the teacher questionnaire was excellent (95 percent). A total of 231 teachers filled out questionnaires. Of these, 103 teachers were classified as team members.

Only two of the 16 schools were largely open space (80 percent or better). Seven more schools had some degree of open space (such as having movable partitions). The remaining seven schools had completely self-contained classrooms. In terms of individual teachers, 75 percent (N=173) were in self-contained classrooms, while the rest were in some kind of an open space situation.

The schools also represented a range of socioeconomic status (SES) in the student population. In three of the schools, most of the teacher responses indicated largely high SES students; in three other schools, most of the teachers reported low SES students. The remaining schools reported a mixture of high and medium SES or a mixture of medium and low SES.

Measurement

Technology

Nonroutinization and differentiation were each measured with a set of items. In the case of differentiation, there were two indices: the first referred to the extent of grouping used in math, reading, and social studies; the second referred to the degree of variation in instructional materials in these subjects.

(Q12) Grouping: Please rank the following four categories for each subject, to show which way your students are organized most frequently. Whole class grouped together; two or three groups; four or more groups; students work individually.

(Q34) Materials Variation: In general, how much variation is there in the materials your students use in each subject? All students generally use the same materials; students are divided into 2 or 3 groups, each group using different materials; students are divided into 4 or more groups, each group using different materials; each student uses different materials.

There were three indices of nonroutinization: frequency of group change, the granting of autonomy to pupils, and little importance of sequencing in dictating student tasks. If student instructional groups were flexible and membership changed frequently, we defined this practice as nonroutinized compared to the case where there is a rigid, caste-like system with stable group membership. Similarly, if students were frequently given autonomy in choosing tasks, we saw this practice as nonroutinized compared to the case where the students are rarely given choice. Lastly, if the instructional program was not highly sequenced and it was not important for one concept or topic to follow another in a set order, this too was considered nonroutinized in comparison to the class where instruction is highly sequenced. Teachers were asked to report on these three aspects of their instruction, separately for reading, math, and social studies:

(Q14) Group Change: If the class is sometimes broken into groups for a subject, how often would you say the membership of groups changes? Every day; several times a week; once a week; once or twice a month; less than once a month.

(Q35) Autonomy: How often are students in your class(es) free to choose their own activities in each subject area? Always; usually; fairly often; seldom; never.

(Q33) Importance of Sequencing: To what degree would you say your instructional program--lessons or concepts --has to be presented in a particular order in each subject? Order very important; order moderately important; order slightly important; order not at all important.

Staffing Patterns

Teaming. We asked specifically about the way teachers worked together: whether it involved such tasks as planning instruction, evaluating student progress, teaching a class jointly, and/or co-ordinating student discipline. Only teachers who could report that they worked with other teachers in one or more of these ways were classified as "team members" (Q16). This definition of teaming was, if anything, too broad. In addition, teachers were asked to specify the subject areas in which teaming took place.

Specialists. There was a single item in the questionnaire measuring the teachers' use of specialists (Q58). Teachers were asked how frequently they discussed their teaching or students with a specialist. Several things should be noted about this item. It does not discriminate between district and school specialists. It does not ask what kind of specialist is being consulted. Nevertheless, this item does deal with reported consultation between teacher and specialist rather than the mere physical presence of specialists which the principal interview investigated. Thus, there may be specialists in schools where teachers report consulting specialists less than once a month, but these specialists may not work directly with teachers.

Adults. Teachers were asked how many aides and adult volunteers were in their classrooms during a typical instruction period in each

subject (Q59). The data consisted of separate enumerations of aides and volunteers for math, reading, and social studies.

Definitions of staffing patterns. In order to compare the traditional, collaborative, and staff-line modes of classroom organization, the following operational definitions were used:

Traditional: An individual teacher reports no teaming and infrequent consultation or no specialists in the school.

Collaborative Group: An individual teacher reports teaming and infrequent use of specialists or no specialists in the school.

Staff-Line: An individual teacher reports no teaming, but consults a specialist once a week or more.

Teachers reporting other combinations of teaming and use of specialists were not used in this comparison of pure types of teacher work relationships.

Team Organization

In the theoretical section, we distinguished between two types of teams: those with highly differentiated roles and a relatively rigid division of labor; and those with more flexible, undifferentiated role structures. In the data analysis we use the frequency of "cross-grouping" as a measure of a less flexible division of labor and the frequency of "joint teaching" as a measure of a more flexible division of labor.

Cross-grouping is a common team practice whereby teachers divide up the students by ability and/or subject matter and use this pupil assignment as the stable basis of what each team member is supposed to be doing for each period of the day. After cross-grouping decisions have taken place, scheduling can direct the teachers as to "who does what with whom at what time." The level of interdependence of the team members is relatively low. The teacher questionnaire included an item on the frequency of cross-grouping for reading, math, and social studies (Q10).

When team members engage in joint teaching, they can be simultaneously teaching a common group of students in the same subject in the same teaching space. They may rotate among groups or individual students, helping and encouraging as they go, or they may take turns introducing different concepts, even during the course of a single lesson. Teachers' roles, in this case, are much less stable and clear. In addition, a much higher level of communication and interdependence is necessary in joint teaching compared to cross-grouping. A questionnaire item on the frequency of joint teaching in math, reading, and social studies operationalized this concept of a relatively flexible division of labor (Q26).

Predictions

With these specific indices defined, the predictions used for statistical analysis of the data are presented below:

1. The presence of teaming will be positively associated with more differentiated and nonroutinized instructional practice.

2. The frequent use of specialists will be positively associated with more differentiated and nonroutinized instructional practice.

3. There will be a higher probability of differentiated and nonroutinized instructional practice for either the collaborative group mode or the staff-line mode than for the isolated mode of classroom teaching.

4. Among teams, cross-grouping will be negatively related to nonroutinized instruction.

5. Among teams, joint teaching will be positively related to nonroutinized instruction.

In reading the tables it should be noted that we have reversed the original question on sequencing, so that teachers who give very little attention to the sequence of materials, will be classified as "high" on the index "Sequencing Unimportant." We did this so that the sequencing measure, like the other measures of nonroutinization, would

have a "high" value indicating "high nonroutinization" and a "low" value indicating "low nonroutinization."

Results

Before presenting the results of these predictions, we present evidence bearing on our assumption that it is possible to characterize a classroom by its level of technological complexity. This evidence is based on an examination of the interrelationships of the indices of differentiation and routinization by classroom.

Interrelationship of Instructional Indices

Underlying our conceptualization of the interplay between structure and technology is a proposition concerning a changed conception of the teaching task. Regardless of which change comes first, a more complex staffing pattern or a more complex instructional practice, the underlying conception of the teaching task is likely to change so that instructional practices in all subject matter areas are likely to grow more complex in a given classroom. Despite the fact that the curricular materials suitable for differentiated instruction are not equally available in all subject areas, we wanted to be able to make a general characterization of the teaching technology of a given classroom across subject matter areas.

In addition, we planned on being able to characterize that classroom technology separately for the dimensions of differentiation and nonroutinization. In the conceptualization of these two dimensions, we saw no necessary correlation between the scores on one dimension and the scores on the other. Whether or not our measures of the two dimensions showed this kind of statistical lack of association was an empirical question, answerable with these data.

In Table 4.1 one can compare grouping practices in one subject matter area with grouping practices in another. The proportion of teachers reporting a particular grouping practice varies markedly by subject. It seems that reading is likely to be conducted in small

groups, whereas social studies is typically taught to the whole class. Math shows the greatest variation; the most frequent patterns are individualized and two to three small groups.

TABLE 4.1

Percentage of Teachers Reporting Various Grouping Practices, by Subject

Type of Grouping	Math (N=212)	Reading (N=216)	Social Studies (N=208)
Whole class	26%	10%	74%
2 - 3 groups	32	35	11
4 or more groups	8	31	5
Individualized	34	24	10

Despite these differences in the way each subject is taught, Table 4.2 shows that there are moderately high associations between a teacher's report of differentiation and routinization in one subject and the same teacher's report in another subject. In other words, teachers tend to be consistent across subjects, and there is a general tendency toward more or less differentiation and routinization or non-routinization that is characteristic of a particular teacher and class.

Not only is the relative complexity of instruction consistent across subject areas in a particular teacher's practice, but, as Table 4.3 shows, all five indices of instructional practice are strongly intercorrelated. These interrelationships mean that teachers who are high on one of the indices of technological complexity, tend to be high on the others.

It is not surprising that the several indices of routinization and differentiation are intercorrelated within each of these two

TABLE 4.2

Correlation between Teachers' Reports on Instruction for Different Subjects (N=208)

Instructional Practice	Subject		
	Math	Reading	Social Studies
Materials Variation			
Math	1.00	.41***	.20
Reading		1.00	.24***
Social Studies			1.00
Group Change			
Math	1.00	.60***	.48***
Reading		1.00	.31***
Social Studies			1.00
Student Autonomy			
Math	1.00	.55***	.41***
Reading		1.00	.37***
Social Studies			1.00

***$p < .001$

dimensions, but we had not expected that there would be a significant intercorrelation of indices between the two dimensions. According to these measures, teachers who do not differentiate their instruction are likely to have highly routine instruction. Conversely, those who differentiate are likely to have nonroutine instruction.

Summarizing Tables 4.1 - 4.3, there is a positive association between indices of complexity across subject matter areas in classrooms; teachers who report one innovative instructional practice also tend to report others. These findings hold despite considerable difference in the complexity of typical practice in different subjects. Second, there is a positive intercorrelation between the different indices we have used for the complexity of each dimension of the technology:

TABLE 4.3

Intercorrelations of Instructional Indices,
Collapsed across Subjects
(N=208)

Indices of Instructional Practice	Differentiation		Nonroutinization		
	Grouping	Materials Variation	Student Autonomy	Group Change	Sequencing Unimportant
Grouping	1.00	.56***	.40***	.31***	.20**
Materials Variation		1.00	.42***	.35***	.28***
Autonomy			1.00	.37***	-.23***
Group Change				1.00	.21*
Sequencing Unimportant					1.00

*p < .05
**p < .01
***p < .001

routinization and differentiation. Finally, the two dimensions of the technology are significantly associated.

Teaming, Specialists, and Extra Adults

Table 4.4 shows the associations between different organizational patterns and indices of differentiation and routinization. This analysis does not take into account the interrelationship of specialist usage, teaming, and extra adults. It provides general evidence on the proposition that increased complexity of staff organization occurs with increased complexity in instructional practice--in this case measured by teacher report rather than principal report.

As can be seen in this table, there are significant associations between all three types of staffing patterns and some of the indices

TABLE 4.4

Relationship of Organizational Patterns to Differentiation and Nonroutinization

Variables	df	X^2
Teaming and Differentiation		
Team x Grouping	2	9.3**
Team x Materials Variation	2	13.2**
Teaming and Nonroutinization		
Team x Group Change	1	1.4
Team x Sequencing Unimportant	2	9.1*
Team x Student Autonomy	2	15.4***
Specialists and Differentiation		
Specialist x Grouping	2	5.4
Specialist x Materials Variation	2	3.08
Specialists and Nonroutinization		
Specialists x Group Change	1	5.9*
Specialists x Sequencing Unimportant	2	11.3**
Specialists x Student Autonomy	2	13.3**
Adults and Differentiation		
Adults x Grouping	2	7.13*
Adults x Materials Variation	2	4.64*
Adults and Nonroutinization		
Adults x Group Change	1	1.64
Adults x Sequencing Unimportant	2	.83
Adults x Student Autonomy	2	.58

*p < .05
**p < .01
***p < .001

of routinization and differentiation. Teaming is related both to the use of more complex grouping patterns and to a wider variety of teaching materials; the instructional practices of team teachers give more autonomy to pupils and place less importance on sequencing of materials.

Teachers who consult specialists also appear to use nonroutinized instructional practice, according to all three indices of this dimension. There is no significant association between using more complex materials and consulting with a specialist.

The addition of adults to the classroom is clearly related to the indices of differentiation but not to those of nonroutinization. In other words, extra adults are reported for classrooms using multiple grouping or individualization. This result is similar to the finding of Sabina Cohen (1973) that the presence of teacher aides was associated with classrooms where different children worked on different materials at different paces.

Much to our surprise, given that we had selected the sample on the basis of pure collaborative group schools in contrast to staff-line schools, analysis of the teacher data revealed that members of teams were more likely to consult with specialists frequently than were teachers who were not teamed. The association was measured by X^2 ($X^2 = 15.9$) and was statistically significant beyond the .001 level.

This positive association suggests that in order to estimate the effects of each type of division of labor, it is necessary to control on specialists while examining the association of teams with differentiation and routinization. Likewise, it is necessary to control on the teaming variable while examining the association of specialists and indices technology. Table 4.5 presents these cross-tabulations, allowing us to examine independent relationships.

Overall, this table reveals complex differences in the observed association between organizational modes and patterns of instructional practice. The associations observed between the use of specialists and indices of technology are very weak when the presence of teaming is held constant. Once teaming is held constant, the use of specialists

TABLE 4.5

Percentage of Teachers Reporting on Differentiation and Nonroutinization by Team Membership and Consultation with Specialists

Frequency of Consultation	Team	Differentiation							
		Grouping				Materials Variation			
		High	Med.	Low	N(173)	High	Med.	Low	N(175)
High	YES	45%	31%	22%	49	24%	41%	35%	49
	NO	43	32	25	28	24	24	52	29
Low	YES	50	16	34	38	43	40	17	35
	NO	19	36	45	58	15	52	34	62

		Nonroutinization (N=187)										
		Group Change			Sequencing Unimportant				Autonomy			
		High	Low	N(85)	High	Med.	Low	N(185)	High	Med.	Low	N(187)
High	YES	54%	46%	22	34%	40%	26%	50	35%	37%	29%	52
	NO	36	64	11	21	32	46	28	17	52	31	29
Low	YES	39	61	23	31	37	31	38	41	38	21	39
	NO	44	56	29	21	42	36	69	15	46	34	67

is only associated with complex grouping if there is no team. Specialists are no longer associated positively with the unimportance of sequencing and autonomy. Lastly, the use of specialists is only associated with frequency of group change if there is also a team.

In contrast, teaming continues to show a consistent positive association with materials variation and autonomy when the specialist variable is controlled. In addition, if a specialist is consulted, teaming is a predictor of the frequency of group change. If there is little or no use of a specialist, teaming is strongly associated with more complex grouping practices.

There is also evidence of interaction effects in this table. The results on grouping practices indicate that either teaming or the use of a specialist predicts individualization of four or more groups. When both are present, the result is approximately the same as when either is present. In contrast, when there are both teams and specialist consultation, there is the highest probability of frequent group change and the lowest stress on sequenced instructional materials.

If we pull out of Table 4.5 those rows which represent a traditional school organization, a pure collaborative mode, and a staff-line mode, we can contrast the association of different kinds of division of labor with indices of instructional practice. It should be remembered that these are individual reports of staff interrelationships and not characterizations of entire schools. Table 4.6 reorganizes the data in Table 4.5 so as to present this contrast.

The only comparisons in Table 4.6 where the pure teaming situation (collaborative group) looks like the specialist-plus-teacher situation are for grouping and group change. Either the collaborative group mode or the staff-line mode appears to be associated with complex grouping in comparison to the traditional mode. In the case of frequency of group change, neither differentiated pattern appears associated with frequency of group change. The staff-line model appears to be associated with less materials variation and somewhat more sequencing than the traditional model. The collaborative group model is markedly associated

TABLE 4.6

Percentage of Teachers Reporting on Differentiation and Nonroutinization
by Type of Staff Interrelationship

	Staff Pattern vs Differentiation							
	Grouping				Materials Variation			
	High	Med.	Low	N	High	Med.	Low	N
Collaborative	50%	16%	34%	38	43%	40%	17%	35
Staff-Line	43	32	25	28	24	24	52	29
Traditional	19	36	45	58	15	52	34	54

	Nonroutinization											
	Group Change			Sequencing Unimportant				Student Autonomy				
	High	Low	N	High	Med.	Low	N	High	Med.	Low	N	
Collaborative	39%	61%	23	31%	37%	31%	38	41%	38%	21%	39	
Staff-Line	36	64	11	21	32	46	28	17	52	31	29	
Traditional	44	56	29	21	42	36	69	15	46	34	54	

with autonomy and with materials variation, in contrast to either of the other two patterns.

These results should be interpreted cautiously with regard to inferring causal relationships, particularly since exogenous factors may be affecting both the structural and the technological variables. For example, if an economic factor were to account for a high level of materials variation and for teaming, then causal inferences concerning teaming and materials variation would be spurious. In the next section, where we introduce variation in how teams work together, we show why there appears to be no simple positive association between teaming and the frequency of group change.

One way to check for possible weaknesses in a functional connection between teaming and technology is to control for open space while examining the association of teaming with indicators of technology. Open space schools are more characteristic of suburban, middle-class areas and may be taken as a rough indicator of a more well-to-do area where there may be more money for materials and where the parents may stress autonomy as a desired educational goal. If there is open space, there is almost invariably teaming, so there is little variation in teaming for open space schools. Table 4.7 presents the level of association as measured by Tau between teaming and instructional practice only for conventional self-contained classrooms.

Teaming continues to be associated with more complex technology even when it takes place in self-contained classrooms.

Team Analysis: Division of Labor and Nonroutinization

To test the proposition on team organization and routinization of teaching tasks it was necessary to analyze the data at the team, rather than the individual level. Scores for teammates were averaged together to obtain aggregate scores. Furthermore, Tables 4.8 - 4.10 include only those teachers in the sample who were classified as team members. This gave us a total of 46 teams composed of a total of 103 teachers. Since this is an effective reduction in sample size, high levels of statistical significance are less likely to occur.

TABLE 4.7

Relationships of Teaming with Differentiation and Nonroutinization for Self-Contained Classrooms

	Tau	N
Teaming by Differentiation		
Teaming x Grouping	.20**	147
Teaming x Material Variation	.17***	148
Teaming by Nonroutinization		
Teaming x Group Change	.16*	67
Teaming x Autonomy	.24***	158
Teaming x Sequencing Unimportant	-.11*	158

*p < .05
**p < .01
***p < .001

TABLE 4.8

Correlations of Cross-Grouping and Joint Teaching with Indices of Instructional Nonroutinization

Types of Collaboration	Instructional Nonroutinization		
	Group Change	Student Autonomy	Sequencing Unimportant
Cross-grouping	-.23+	-.16	.04
Joint Teaching	.64**	.16	-.11

+p < .10
**p < .01

In Table 4.8 the predicted association of flexibility in team organization and routinization is clearly supported only for the item measuring frequency of instructional group change. Teams using cross-grouping are less likely to make frequent changes in instructional groups than teams which do not cross-group. Also, the report of joint teaching by members of a given team is positively correlated with frequency of membership change ($r = .64$). The relationship for autonomy is in the predicted direction but does not reach statistical significance. Team organization does not appear to be related to the stress laid on sequencing.

Because of differences between subject areas, it is advisable to examine the relationship between team organization and routinization of the technology separately for math, reading, and social studies (Table 4.9). There is a marked positive association between joint teaching and frequent group change for each subject area. The relationship between cross-grouping and group change is negative, as predicted, but is considerably weaker when broken down by subject matter. The positive relationship of joint teaching and autonomy is stronger for math than for reading and social studies. Sequencing continues to show no significant relationship to team organization. In general the predicted pattern holds for frequency of group change and for autonomy.

It is important to examine the independent relations of cross-grouping and joint teaching to routinization because some team may both cross-group and joint teach (in different subjects), with the result that the relationships may partially cancel each other out. Table 4.10 shows the results of a multiple regression analysis, which allowed us to separate the contributions of cross-grouping and joint teaching to explaining variance in two indices of routinization (sequencing was not included because the regression analysis results were not significant).

Cross-grouping is still negatively related to group change, and joint teaching is positively related to group change. However, when we examine the relationships with autonomy, it is apparent that whereas

TABLE 4.9

Correlations of Cross-Grouping and Joint Teaching with Indices of Nonroutinization, by Subject

Type of Collaboration	Group Change			Student Autonomy			Sequencing Unimportant		
	Math	Reading	Social Studies	Math	Reading	Social Studies	Math	Reading	Social Studies
Cross-grouping									
Math	-.09			-.29			-.02		
Reading		-.18			-.38**			-.003	
Social Studies			-.07			.04			-.06
Joint Teaching									
Math	.42**			.28**			.01		
Reading		.47**			.13			-.03	
Social Studies			.28*			.13			-.25

*p < .05
**p < .01

TABLE 4.10

Regression of Cross-grouping and Joint Teaching on Two Indices of Nonroutinization: Group Change and Autonomy

Dependent Variable	Independent Variable	R^2	Beta	F
Group Change	Cross-grouping	.63	-.47	15.4**
	Joint Teaching		.66	8.0**
Autonomy	Cross-grouping	.33	.05	.04
	Joint Teaching		.57	6.2**

**$p < .01$

joint teaching is positively related, cross-grouping is not related at all. Together, cross-grouping and joint teaching account for 63 percent of the variance in group change and 31 percent of the variance in autonomy.

Discussion

A review of the results for the predictions with which we began reveals considerable evidence for the central proposition of the study, i.e., that there is an association between complexity of structure and complexity of technology. At the teacher level, teaming shows particularly strong and consistent relationships with the use of four or more groups in a class and with individualization; the simultaneous use of a wide variety of teaching materials; the granting of autonomy to pupils in choice of task; and little stress on a particular sequence of teaching materials. The use of specialists also appears to be associated with some of these indices; however, when teaming is held constant, the relationship of frequency of specialist consultation and

complexity of instructional practice is greatly weakened. The presence of extra adults in the classroom is associated with more complex grouping practices and the use of multiple teaching materials.

When we compare those teachers who represent pure types of working relationships--traditional, staff-line, and collaborative--we find that the traditional pattern has the lowest probability of reporting complex instructional practices. Again, teaming--the collaborative mode--is clearly the most powerful and consistent in predicting differentiation and nonroutinization in instructional practice. The use of specialists --the staff-line mode--appears to be intermediate between the two other types.

The simple use of the teaming variable was not associated with the frequency of group change, i.e., change in the membership of instructional groups. This is accounted for by the predicted finding that there are different types of teams, whose differing work organization results in different types of instruction. We found that cross-grouping in teams is negatively associated with autonomy and frequency of group change. The incidence of joint teaching, in contrast, is positively associated with these same two indices. In a regression analysis, we found that, together, cross-grouping and joint teaching account for 63 percent of the variance in the index of group change reported by teachers in teams.

The analysis of the interrelationship of indicators of instructional technology suggests that it is possible to characterize classrooms in terms of level of differentiation and routinization. Despite subject matter differences there is a strong correlation between relative level in one subject matter area and relative level in another. In more concrete language, teachers who attempt one complex, innovative instructional practice also attempt others. Likewise, teachers who use traditional methods of grouping and routine decision making in one subject matter area tend to use these methods in others.

Measurement Problems

We did not expect that the indices of routinization would be positively associated with the indices of differentiation. We had thought of a highly differentiated, individualized program as one that would proceed on the basis of decisions built into some of the individualized programmed curricula available in the early grades. We particularly did not expect teachers who reported their grouping practices as "individualized" to report that they extended considerable autonomy to the children in choice of task, because we had associated "individualization" with a diagnostic-prescriptive approach where the child is given materials according to some sort of a professional decision based on aptitude and performance.

As we have talked with teachers we have come to realize that the diagnostic-prescriptive approach to the teaching of reading is probably a rarity. The ideal may even be impractical in light of the gaps in knowledge of teaching reading and in light of the number of experts and assisting adults necessary to use an individualized medical model in a classroom of 25 children.

The observed association between differentiation and autonomy may have been due to the too broad item measuring autonomy. Any kind of choice given to the children may have resulted in a teacher's reporting "autonomous" instruction. We feel that we do not understand what a teacher meant when he or she answered our question on autonomy. Some teachers give very minor and constricted choices to children, yet view themselves as allowing genuine autonomy, whereas others try to build a whole program around teaching the child to be independent and autonomous (as in the "open" classroom). Our simple question did not distinguish these two types.

A number of teachers who had no specialist available and no teacher aides or volunteers reported individualized and autonomous classrooms. We began to wonder how a teacher could conceivably run such a classroom while providing students adequate feedback for learning. We suspect that some of these classrooms may be run in a loose

manner without the teacher monitoring feedback as a source of successive decision making. Other teachers, using just as highly differentiated materials and freedom of choice for the children might, by means of proper planning and coordination, run a classroom where there was adequate feedback (and possibly desired student outcomes).

The index of autonomy needs to include these issues and possibly others. In order to improve this index we need further observation of just how some of these complex autonomous classrooms are run, how teachers manage the problem of coordination and feedback. After this observation we should be able to refine the concept of autonomy and its index in the questionnaire for the next wave of the study.

Similarly, some of the observed associations between differentiation and group change may have been due to the way we worded the question on group change. By asking how frequently membership of instructional groups changed, we may have restricted the "frequent" alternative only to teachers who had many groups to work with in the first place. Possibly with better measures of nonroutinization, we would not find intercorrelation of the indices between the dimensions.

There may also be a measurement problem with our question on consultation with specialists. We have spent many years studying teams and now have a good understanding of how to ask questions about their modes of working together, but we do not have a parallel understanding about the use of specialists at the elementary school level. In the principal questionnaire, we mistakenly mixed subject area specialists with psychologists and librarians in asking for the number of specialists at the school. At the teacher level, we did not ask about the basis on which the teachers were consulting the specialists, nor for what subject area. Conversations with teachers in our sample reveal that many specialists operate on a "pull-out" basis, working with a small number of children with learning problems, while others work closely with the teacher helping him or her solve classroom instructional problems. The specialist who works with one child or a few children taken out of the classroom for this purpose is unlikely to

have much effect on the complexity of classroom instructional practice. In the second wave, it will be necessary to find out just how teachers and specialists relate to each other. With a better index, we may obtain stronger associations between certain kinds of specialist-teacher relationships and complexity of technology.

Problems of Causal Inference

The relationship between the presence of extra adults and differentiation is, in all probability, a clear case of the demands of the program necessitating extra adult help. The direction of causality is not so clear in the relationship of teaming to technology. One can argue that teaming could be a response to the increased problems of monitoring, guiding, and evaluating student progress in a highly differentiated instructional program. Teaming can help reduce the burden. For one thing, teaming can increase the available stock of instructional materials through sharing those on hand and through collective efforts in acquiring or developing materials. Furthermore, the problem can be simplified if team members specialize by subject area. Having more time to prepare and develop activities for a single subject lightens each teacher's load, even though the total number of pupils receiving complex instruction increases.

One cannot, however, conclude from these data that the introduction of complex instructional practices will cause teaming to occur. Several alternative explanations must be considered. One is that the practice of teaming was introduced first and led to changes in instructional practice. A second alternative explanation is that both teaming and innovative instructional practice are characteristic of certain schools where everything fashionable in education diffuses across both structure and technology. It is true, however, that if we remove the fashionable open space schools from the analysis, teaming and technological complexity continue to be associated in more conventional self-contained classrooms.

We cannot eliminate either of these alternative explanations with these cross-sectional data. The second wave of this study should help

us determine the conditions under which teaming may be required by the technology and the conditions under which teaming may produce technological change.

When the analysis moves to the actual working relations of team members, we have stronger grounds for arguing that some types of teaching technology are not feasible without appropriate modes of organization. The data provide strong support for the hypothesis that practices such as flexible group instruction are unlikely to occur unless team members work closely together with more flexible role differentiation, as in joint teaching. Teaming by itself is probably not a sufficient condition for nonroutinized techniques such as flexible group instruction. If the principals and teachers wish to use such a technique, then the way in which the team works together deserves administrative support and attention.

In conclusion, the findings in the teacher data suggest that we should concentrate more of our efforts on collecting teacher questionnaires in the second wave. Even if we do not have the opportunity to follow these new classrooms over time, we will be able to gather some vital organizational information on teachers' attempts to monitor and coordinate some of these highly complex classrooms. By discovering the relationship between the adequacy of student feedback and the kind of organizational support the teacher is receiving, we will have some possibly vital information leading to a better understanding of student outcomes in various settings.

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CHAPTER 5

THE STAFFING STRUCTURE OF DISTRICTS AND SCHOOLS

What kinds of organizations are schools? How different is one school from another in terms of its curriculum and staffing patterns? Are small school districts organized differently from large school districts? Are school systems top-heavy bureaucratic structures in which power is concentrated in centralized district offices? Are they highly decentralized structures in which fundamental educational decisions are made by individual, professionally trained teachers? Or are they organized as "line" structures with "staff" resources located in the district office to dispense technical advice to individual teachers? These illustrate the types of questions we address in this chapter and the next.

To render our list of questions more manageable we have attempted to sketch a few simplified models of school organization as foils for arranging our data. Somewhat arbitrarily, we have distinguished between three levels of organization in school systems: district, school, and classroom. One way to pose our research questions is to ask at which of the levels the teaching program is primarily organized. That is, do school districts seek to plan, staff, and oversee an educational program for the district as a whole? Or, perhaps because of the varied needs of local clienteles, are decisions about the structure, content, and staffing of programs made at the level of the individual elementary school? Or, to pose yet a third possibility, are such decisions made at the classroom level by individual teachers and teaching teams? In short, at what level does the organization of educational activities take place?

Two important corrections of this formulation are required. First, we must allow for the possibility of considerable diversity in school organization and practice among districts. Second, we must allow for the likelihood that organization occurs simultaneously at two or more

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This chapter was written by W. Richard Scott, John W. Meyer, Jo-Ann K. Intili, and Sally Main.

levels, i.e., that while activities may primarily be organized at the classroom level, schoolwide or district structure may have some impact on the way they are carried out.

In this chapter, we analyze staffing patterns at the district and school levels as one basis for understanding the organization of elementary schools. Knowing the number and types of personnel available at each level allows us to make inferences about the capabilities of each level and the division of labor among them. It allows us to look for significant differences in the organization of school systems as a function of size. (Are big districts simply little districts with more schools, or are they organized on a different basis?) And it allows us to compare school systems and other types of organizations described in a growing body of studies concerned with organizational structure; such studies, in which the organizations themselves are the units of analysis, are of relatively recent origin, but their number is now sufficient to support some comparisons.

When we take up the question of the effect of organizational arrangements on the educational program of schools, we focus mainly on decisions about pupil grouping, on decisions about teacher methods, on decisions about what curricula are adopted for use in the classroom, on the level of both teacher and student morale, and on principals' efforts to help teachers improve instruction. While other chapters in this report are centered on the teaching of reading in grades one through three, in this chapter we stay at a macro level, where we expect the effects of district size to be manifest.

District Organization

The 34 school districts in our survey of Bay Area schools varied enormously in size, financial status, and staffing characteristics, as was shown in Chapter 2. To recapitulate, the districts ranged in size from one school to 133 schools. And even in the small geographical region encompassed by our research, we found wide variability in district expenditures per student and in other measures of district wealth. In

our sample financial status was related to size. We are, however, less interested in the amount of money than in what it is used for in terms of its effects on school and district staffing. We will describe these effects at appropriate points below.

Staffing of the Central Office

Although there has been much public discussion of the alleged over-bureaucratization of the public school system, our examination of the relative size of the administrative staff in the central district office did not tend to support the allegation. The total number of professional staff in the central offices of the 34 districts in the sample ranged from an average of four persons in the smallest districts to 53 persons in the largest districts. By comparison, the total number of certificated personnel in the districts--regular and special classroom teachers along with most nonteaching specialists--ranged from an average of 42 persons in the smallest districts to 2,112 in the largest. Thus, the ratio of central office administrators to total certificated staff within the district declined as district size increased, as the following tabulation makes clear:

District size		Proportion of central-office administrators to certificated staff
Small	(1 to 6 schools)	.075
Medium	(7 to 14 schools)	.073
Medium-large	(15 to 24 schools)	.072
Large	(25 or more schools)	.055

These represent smaller proportions of central office administrators than we had expected to find.

The composition of the district staff is also of interest. We distinguished among the following categories:

> General administrators: the superintendent and the superintendent's chief assistants or associates in charge of elementary instruction, personnel, and business.

Special administrators: other district-level administrators who have supervisory responsibility for such areas as guidance, special education, multicultural education, curriculum, community relations, and coordination of personnel in subject-matter areas

Specialists working directly with students: professional staff who do not have supervisory responsibilities but work directly with students in a non-instructional capacity, including counselors, psychologists, and attendance personnel

Specialists not working directly with students: professional staff who do not have supervisory responsibilities and who do not work directly with students, including curriculum specialists, psychometrists, and accountants

District-level teachers: staff with direct instructional responsibilities who usually provide services to more than one elementary school, including music teachers, special education teachers, and physical education teachers

Support staff: nonprofessional personnel who work at the district office, including secretaries, file clerks, receptionists, and key punch operators

Figure 5.1 shows the average number of staff within these categories in relation to district size (i.e., number of elementary schools). The number of general administrators remained low and relatively constant across all size categories. Special administrators appeared to increase at a relatively constant rate with increases in district size. With only one exception, all other staffing categories increased at a decreasing rate as district size increased, following the classic pattern described by Blau (1970) and others. The exception, district-level teachers, increased only for the two smaller categories of districts and then declined in actual numbers, presumably because special instructional personnel were more likely to be employed at the school than at the district level in larger districts. (Note that within school staffs, as displayed in Figure 5.3, the category "special teachers" behaved in a manner similar to total certificated staff, increasing with district size at a decreasing rate.)

Having examined the relation of district size to staffing patterns, let us consider briefly the effect of district income (measured, as before, as average expense per elementary student, the number of students

obtained from ADA records). As Table 5.1 reveals, holding size constant, district wealth was used to purchase more of all types of personnel, but especially more special administrators, district-level teachers, and support staff. Again, it appears that there is little evidence to sustain the belief that district funds are used disproportionately for central office staff at the expense of school-level personnel (represented in Table 5.1 by "total certificated personnel").

TABLE 5.1

Correlation between District Wealth and Types of Staff, Controlling for District Size

Central Office Staff	Pearson r
General administrators	.24
Special administrators	.69***
Specialists not working with students	.16
Specialists working with students	.45*
District-level teachers	.57**
Support staff	.52**
Total certificated personnel in the district	.44*

*p < .05
**p < .01
***p < .001

The staff categories in the central office may be examined in another way. If we take total central office professional staff to equal 100 percent, then we may ask what percentage of the staff of different sized districts constituted the various staff categories. The results are described in Table 5.2.

These percentages indicate even more clearly than the information summarized in Figure 5.1 what a large proportion of the central office staff is composed of personnel who do not have supervisory responsibilities, or even advisory responsibilities, but work directly with students. Thus, specialists working with students, such as counselors and psychol-

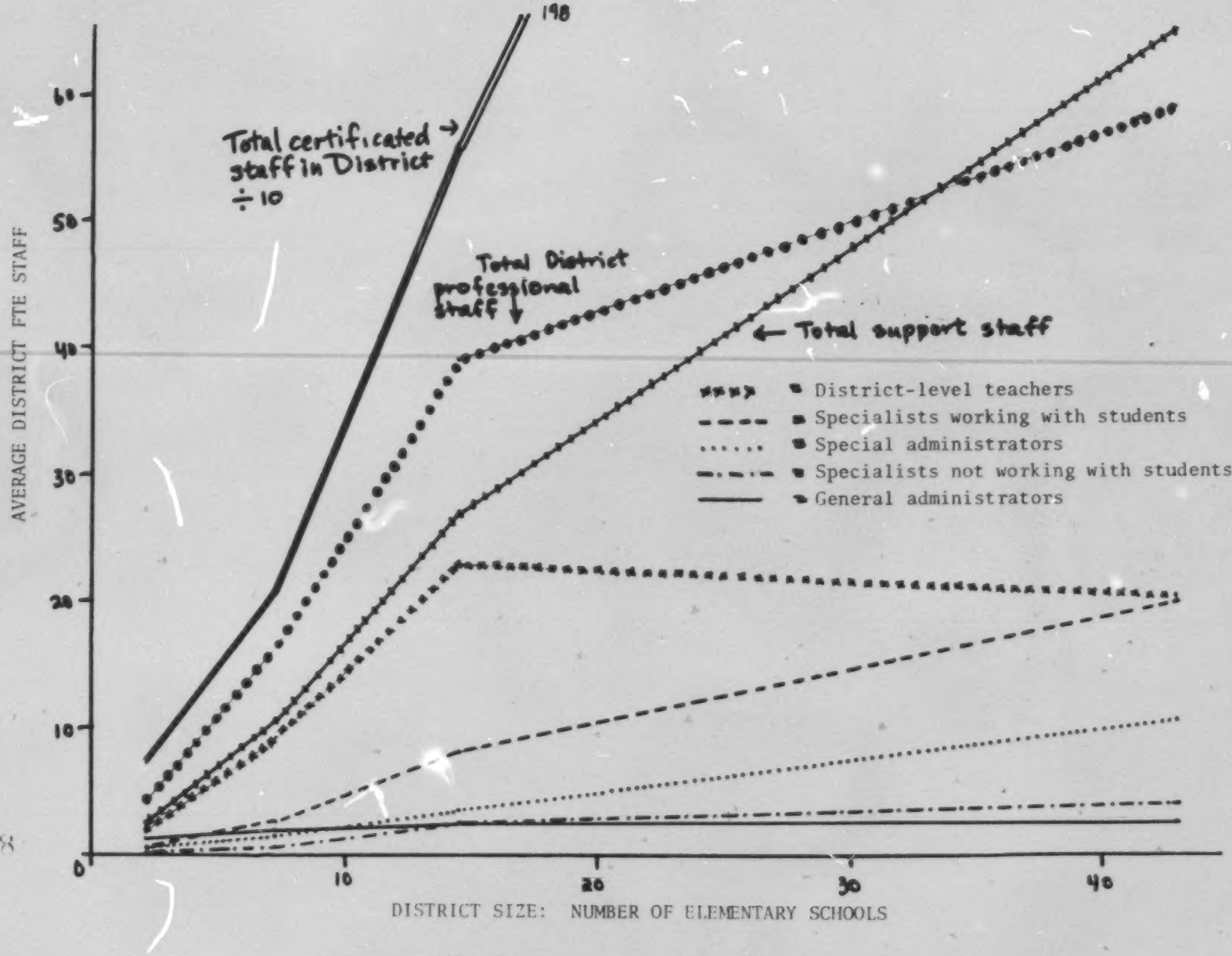

Fig. 5.1. Categories of staff related to size of district.

ogists, and district-level teachers, such as music teachers and special education teachers, constituted 44 percent of the staff in small district offices and 33 percent of the staff in large offices.

TABLE 5.2

Percentage of District Staff Types by District Size

Type of Staff	Districts				
	Small	Medium	Medium-large	Large	Pearson r
General administrators	26%	14%	10%	6%	-.45
Special administrators	21	17	14	26	.23
Specialists not working with students	9	14	23	35	.44
Specialists working with students	9	7	4	9	-.05
District-level teachers	35	48	49	24	-.16

Figure 5.2 shows the same staff categories but standardizes them on a per school basis. Note that the line for general administration now has a negative slope, while special administration is basically a flat line, constant regardless of the number of schools per district. The staff groups who work directly with students--total certificated staff within schools and district office specialists working directly with students--are the only categories that tended to increase as district size increased. This suggests that the average size of the schools was somewhat larger in larger districts--other data reveal that this is in fact the case--and/or that the ratio of staff to students is somewhat higher in larger districts. All other central office staff categories declined proportionally as district size increased, suggesting the operation of economies of scale in administration.

Comparisons between School Districts and Other Organizations

We can better assess our descriptive data on district organization by examining our findings in the light of studies of other types of or-

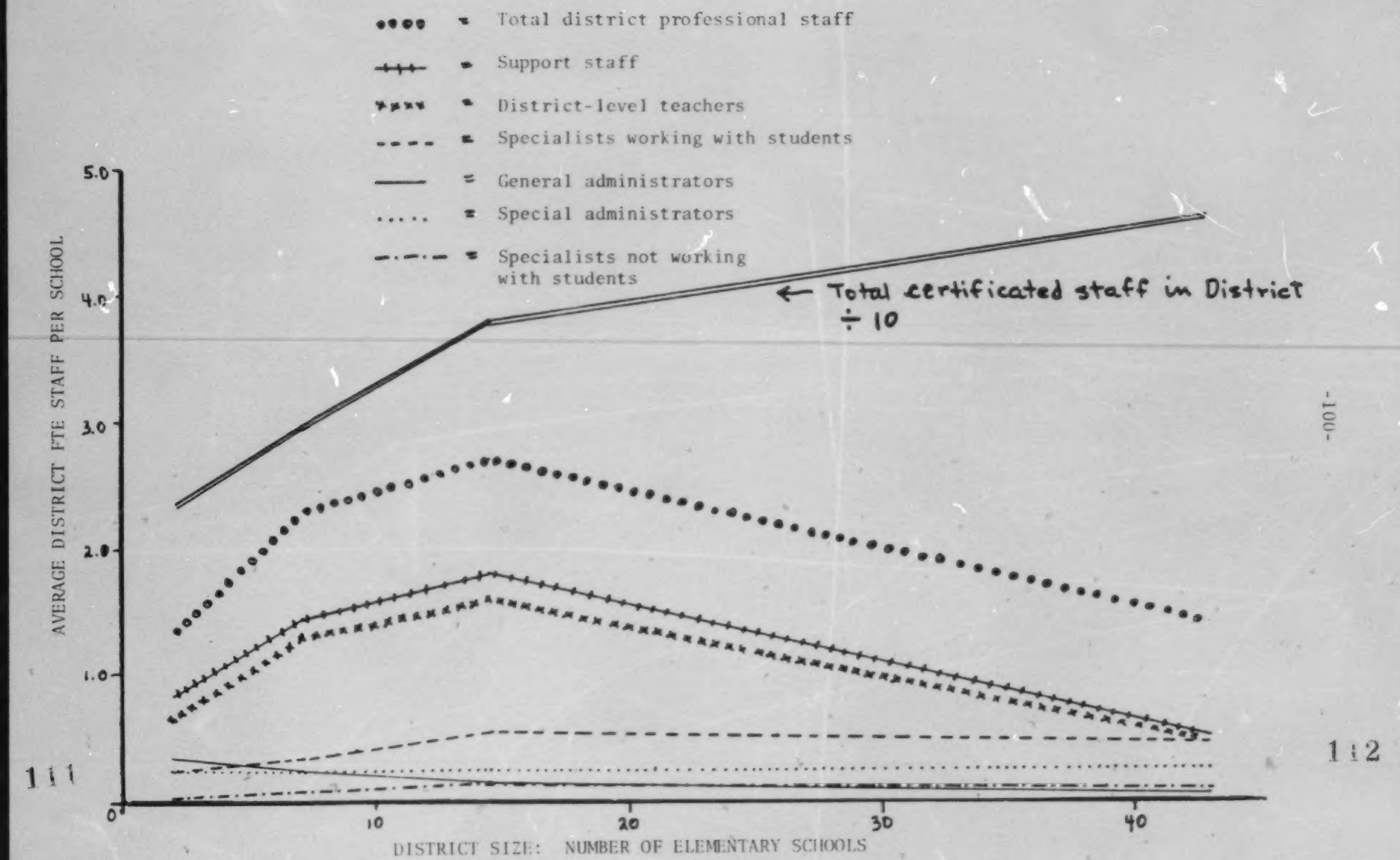

Fig. 5.2. Categories of staff per school related to size of district.

ganizations. Let us deal first with the relation between the size of the organization and the relative size of the administrative component. Most previous organizational research reveals a slight negative correlation between size of organization and proportion of staff devoted to administration (see Melman, 1951; Bendix, 1956; Anderson & Warkov, 1961; Rushing, 1967; Blau & Schoenherr, 1971).

We used as our primary measure of the size of school organization the number of elementary students in the district.[1] As may be inferred from figures 5.1 and 5.2, our survey revealed a slight negative correlation (-.16) between the total number of elementary students in the district and the ratio of total central office staff to students.[2] As noted, this finding is similar to that of most other studies that have examined the relation between organizational size and the ratio of administrators to other personnel. Such a correlation is consistent with an economy-of-scale argument: larger districts require proportionally fewer managers than smaller ones for administering their central offices.

We may also ask about the relation between organizational complexity and the administrative ratio. Previous research suggests that as organizations become more complex (i.e., develop a more differentiated structure), the relative size of the administrative component will increase (see Anderson & Warkov, 1961; Hall, Haas, & Johnson, 1967; Rushing, 1967; Blau & Schoenherr, 1971). Differentiation can occur either along vertical

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[1] In systems in which the organization has no choice but to render services to all who meet certain criteria (in this case, age and residence), size of clientele should be a good indicator of the scale of the system. That this is indeed the case is indicated by the very high positive correlation found between the number of students in the district and the number of certificated district employees ($r = .98$). For employment security agencies, somewhat comparable public service organizations, Blau and Schoenherr (1971) reported similarly high positive correlations of number of employees with (a) number of clients claiming unemployment benefits ($r = .98$) and (b) number of persons applying for employment services ($r = .96$).

[2] Freeman and Kronenfeld (1973) note that such negative correlations between size and a special component taken as a ratio to size may have an artifactual element.

(hierarchical) lines or along horizontal lines, including increases in the number of types of specialists and the number of places at which work is carried out. Theoretically, it can be argued that increases in organizational differentiation lead to increases in the problems of coordination and that this in turn leads to increases in the relative number of administrators, since they are expected to perform coordinative tasks.

The most obvious type of differentiation present in school district organization is the treatment of schools as separate administrative subunits--"branch offices," so to speak, within each district. As might be expected, the number of elementary schools per district is very highly correlated with the number of elementary students in the district ($r = .98$). This relation is sufficiently strong to prevent us from examining the independent effect (if any) of number of schools, in contrast to number of students, on the administrative ratio. In one of the earliest studies relating size to administrative ratio, Terrien and Mills (1955) reported a positive relation between district size and proportion of administrators. Anderson and Warkov (1961) suggested that this unusual finding might be due to the complexity of administration arising from the number of different locations at which work is carried out. The Terrien and Mills finding was not replicated by our study. While it is true that our measure of district administrators excludes all administrators working at the individual school level (an average of 1.1 per school), this is not viewed as a defect, since we would expect the burden of coordination to fall on the district, not the school administrative staff.

On reflection, however, it is not at all clear why the creation of new subunits should pose additional administrative burdens of the type that would require the continuing attention of district officials. Many types of interdependence can be handled with the use of rules, schedules, or other types of impersonal mechanisms of coordination (Blau & Scott, 1962, pp. 176-186; Thompson, 1967, pp. 54-56). Most interdependence among schools--for instance, movement of students from grade to grade and school to school, or rotation of special teachers on a regular schedule--would seem to fall into these categories. Even more to the point,

the creation of subunits like schools may not increase interdependence at all, and may, in some situations, reduce interdependence and hence demands on the central office for coordination.

To understand how this might happen, we must distinguish between two types of differentiation: functional differentiation and segmentation. Functional differentiation refers to the creation of new structural units, such as new leadership positions or new work specialties that differ in their functional role from previously existing units. By contrast, the development of new subunits that do not differ appreciably in structure or function from existing units represents a completely different process, which is usefully termed segmentation (Durkheim, 1947). Most school districts create subunits by segmentation; as the number of students to be served increases, new schools similar in structure to existing schools are added. Elementary schools in particular tend not to become specialized or functionally differentiated one from another, but rather to mirror existing units in staffing patterns and services offered.

Functional interdependence tends to generate a higher demand for administrative services aimed at coordination. If elementary schools were to become functionally differentiated so that each school could handle only certain types of students--for example, one specializing in especially talented children, another in children with a learning deficiency--then district administrators would need to devote considerable attention to the selection of children for the various specialized programs, the transfer of children from one program to another, and the selection, placement, and transfer of staff. Such problems do not arise if all schools are carbon copies of one another and there is relatively little interdependence among the operating units.

While a segmented structure does not require heavy coordinative efforts from a central office, it is possible for organizations of this type to be highly centralized. Central offices sometimes impose uniform rules and standards on a system of segmented units, permitting little discretion to local officials. However, there is little in our data on the structure and composition of district staffing to suggest that this

pattern characterizes the relation between the central office and the individual school.

As revealed in figures 5.1 and 5.2, neither the absolute numbers of central office staff nor the size of the staff relative to all district employees or students is large. Furthermore, most central office staff are not even administrators; they do not have supervisory responsibilities, but work directly with students in an instructional or support capacity. Also, our view of school organization as highly segmented and decentralized received some support from superintendents themselves, who were asked in our interview: "Do you see yourself more as the coordinator of the activities of separate and relatively autonomous school units, or more as the head of an integrated organization with schools as subunits of the larger whole?" More than 60 percent of the superintendents in our sample viewed themselves as coordinators of relatively autonomous units.

We will return to this question of the extent of coordination and control exercised by the central office over individual schools after we describe the staffing of individual schools. Chapter 6 is also devoted to this topic.

School Organization

The school staff categories we have used are as follows: administrative staff, regular classroom teachers, special teachers, nonteaching specialists, paid aides, clerical staff, and adult volunteers. Figures 5.3 and 5.4 display staffing patterns at the school level in relation to size of school (i.e., number of pupils).

Figure 5.3 shows that total administrative staff is relatively constant across all size categories. In the typical elementary school, there is only one administrative officer, regardless of school size--the principal. Other paid staff, such as clerical assistants, nonteaching specialists, special teachers, and paid aides, increase slightly with increases in school size. Only classroom teachers, however, appear to be a regular function of size; this category exhibits a positive and regular slope with increases in numbers of students. Obviously, then,

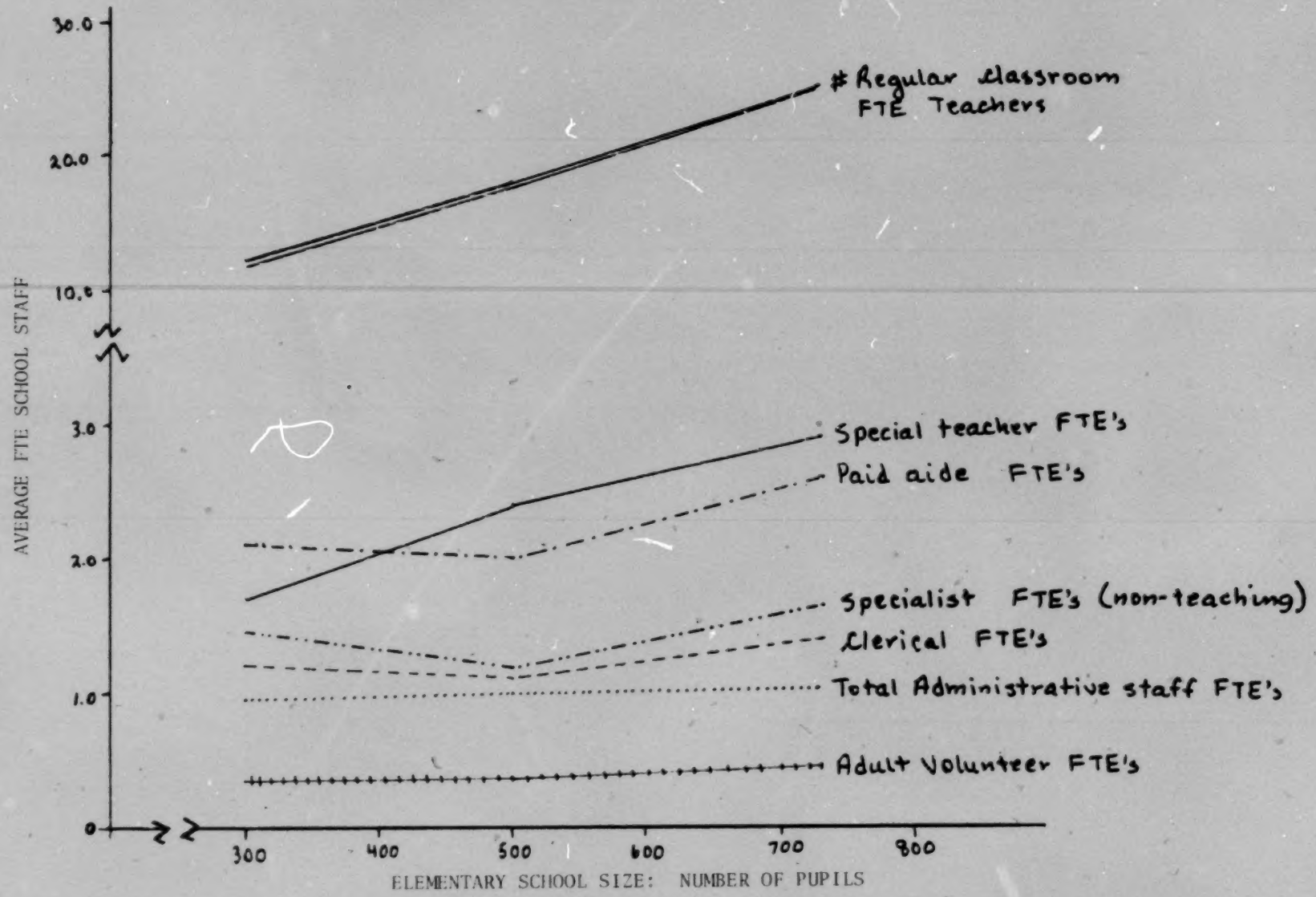

Fig. 5.3. Categories of staff related to size of school.

whether numbers of certificated employees or numbers of students is taken as a measure of school size, there is a negative relation between size of school and proportion of administrators. The proportion of administrators to classroom teachers declines from .078 in small schools to .057 in medium-sized schools to .049 in larger schools.

In Figure 5.4, staffing patterns as affected by size of school are described on a per pupil basis. The figure clearly shows an economy-of-scale, although for most categories of staff, the greatest effect is on medium-sized schools (approximately 500 students). With the exception of special teachers, and perhaps regular classroom teachers, larger schools were no more "efficient" in their use of staff than medium-sized schools.

These two figures do not describe a highly differentiated organization. Excluding administrators, volunteers, and clerical personnel, there appear to be four basic types of staff members: two types of teachers, regular and special (e.g., teachers working with handicapped students); nonteaching specialists (e.g., counselors); and paid aides usually working in classrooms under the direction of regular teachers. The emergence of these specialized roles represents some functional differentiation within the school and can be expected to increase the interdependence of staff activities and the coordinative tasks of administrators. But as Figure 5.3 makes clear, the numbers of such differentiated staff other than regular classroom teachers is quite small, even in the largest schools in our sample.

It is abundantly clear that the great majority of school employees are regular classroom teachers. Chapter 7 of this report describes the extent to which teachers in our sample organize themselves into more complex patterns for collaborative teaching. At this point, we would observe that such differentiation, no matter how extensive, has not yet become institutionalized into a set of positions or titles or roles that allows for recognition or accountability beyond individual school, let alone district, lines.

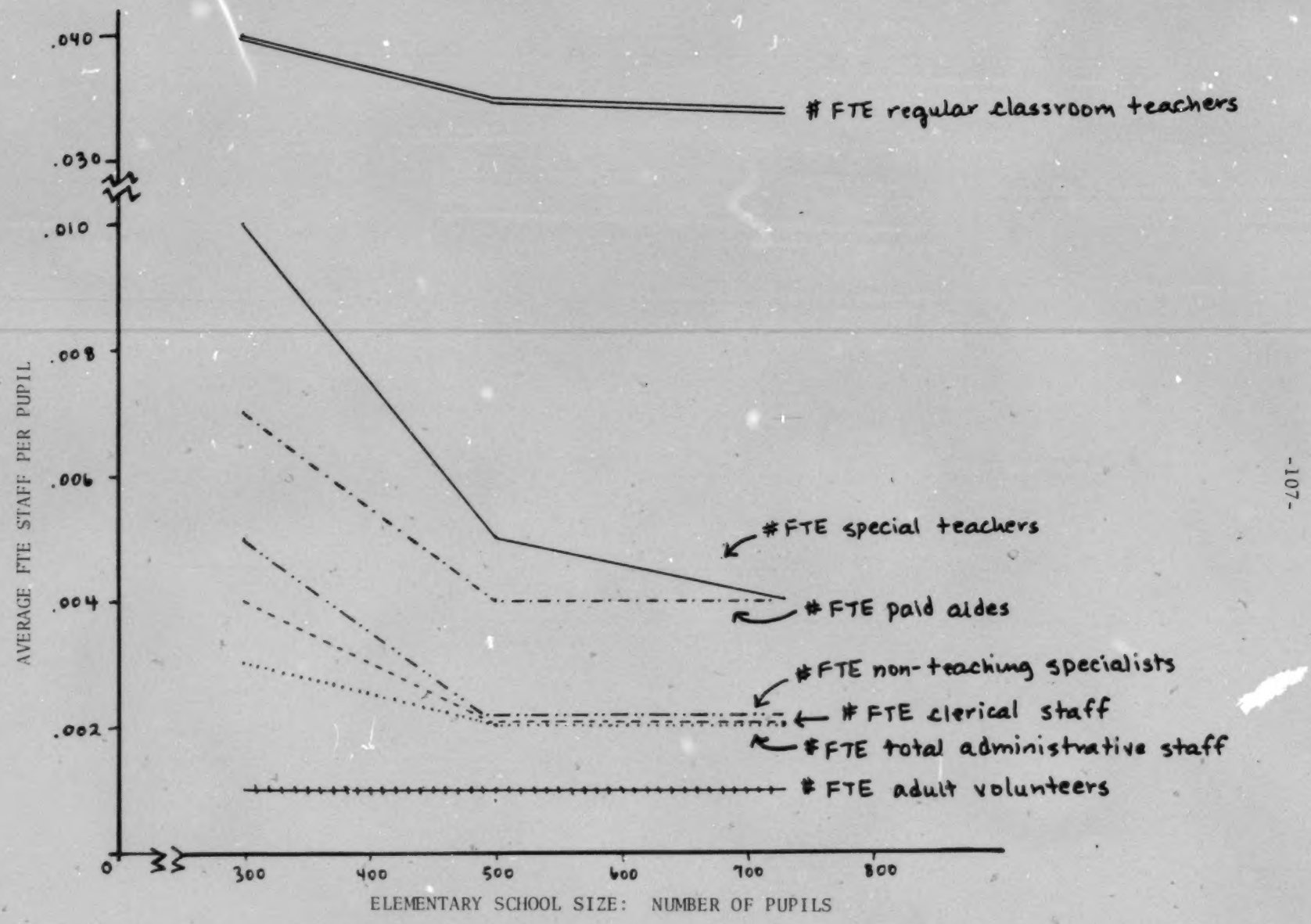

Fig. 5.4. Categories of staff per pupil related to size of school.

Evaluation and Influence: Two Links between District and School

Subunits of organizations may be more or less closely coordinated, more or less centralized in terms of their decision-making structures. In this section, we briefly consider two possible modes of linking the district office with schools: evaluation and influence. Although our evidence at this point is not definitive, it suggests that the linkages among units are neither strong nor highly centralized, at least with respect to the operation of the elementary school reading curriculum.

Previous theoretical work suggests the relevance of appropriate and frequent performance evaluations as a mechanism of organizational control (Scott, Dornbusch, Busching, & Laing, 1967; Dornbusch & Scott, 1975). Preliminary results from our study suggest that performance evaluations of schools by district personnel are typically either rare and diffuse or nonexistent. For example, approximately 69 percent of the superintendents in our sample reported that school principals were evaluated annually or less frequently. Eighty-seven percent reported that overall evaluations of school performance in their districts were conducted annually or less frequently; 37 percent reported that such evaluations were never conducted.

Focusing specifically on evaluations of the reading program within elementary schools, both superintendents and principals viewed such evaluations as primarily a school-level responsibility (80 percent of both samples). And, even within schools, both types of respondents (56 percent of the superintendents and 53 percent of the principals) viewed program evaluation as primarily the responsibility of the teacher. Only 35 percent of our sample of principals reported that reading teachers were evaluated "frequently" or "very frequently," while at the other end of the scale, 29 percent reported that reading teachers were never evaluated.

Influence on decision making is another possible link between the district and its schools. We may examine data relating to the distribution of participation in and influence on decisions made within school organizations. Principals were asked to identify the likely participants in

decisions over a wide range of topics. By summing for each group of participants the number of instances of "usually" or "always" involved, we calculated mean total decision participation scores (see Table 5.3).

TABLE 5.3

Mean Total Decision Participation Scores across Twelve Topics, as Reported by Principals

Participant Group	Mean Score	Range (0-50)
Principals	49	35-50
Teachers	44	27-50
Faculty groups	39	23-50
District office	29	10-46
Community groups	25	10-42

Assuming that we may place some faith in these reports by a set of interested participants, there is a striking decrease in average score as we compare within-school to outside-school participants. District office influence was not perceived to be much greater than that of community groups. Principals clearly perceived the school district as decentralized, with much higher involvement of school personnel than of district personnel in decision making.

The conclusion that school-level participants have more influence on decisions than district-level staff is reinforced when individual decision areas are examined. We asked principals at what level a decision would typically be made for a number of areas. In general, we found low reported involvement of district offices. The highest value reported was for a decision regarding the use of paid aides; 18 percent of the principals reported that such a decision would typically be made at the district level. Virtually all other specific decisions were reported by principals to be made most often by themselves together with teachers. These included assigning pupils to classes, setting school schedules, adopting new teaching methods involving more than one classroom, setting policies about pupil grouping, adopting special courses,

and establishing school policies about the use of equipment, buildings, and grounds. In only two areas did the principals claim that decisions would typically be made by themselves alone: setting the agenda for faculty meetings (70 percent) and handling serious disciplinary problems (66 percent). No decision areas were reported (by principals) to be typically decided by teachers alone.

The extremely high average participation score reported by principals describing their own participation--49 out of a maximum possible score of 50--led us to wonder whether principals also perceived themselves as highly influential across particular decision areas. The responses to a separate question on principal influence permitted us to identify those areas in which principals saw themselves as highly influential (see Table 5.4). What is perhaps most interesting about this influence profile is the sharp drop in the principals' reported influence on matters related to educational practice, whether curriculum development, teacher improvement, or teaching methods, from rather high influence on administration of policies and establishing a proper school climate.

TABLE 5.4

Principals' Self-reported Influence by Decision Area

Area	Percentage Reporting Self as Extremely Influential
Carrying out board or district policies	44%
Maintaining or achieving good teacher morale	40
Influencing parents' attitudes	35
Influencing pupil morale or behavior	34
Developing or adopting improved curricula or programs	18
Helping weaker teachers improve	14
Raising the level of achievement of pupils weak in reading or arithmetic	10
Determining methods used by teachers in their daily classroom work	4

With respect to the patterning of participation and influence on decisions, we may tentatively conclude that the district office does not loom as a powerful presence in the eyes of the principals in our sample, at least for the decision areas considered. The principals perceive themselves as having considerable influence, but most decisions are shared with teachers, not made independently. And the nearer a decision area is to matters affecting the form or substance of instruction, the more likely principals are to defer to the judgment of individual teachers or groups of teachers. These few findings suggest that not only are school districts segmented and decentralized organizations in which much autonomy is exercised by individual schools, but individual schools are also characterized by considerable decentralization. Individual teachers appear to participate in many types of decisions and to exercise considerable influence on the instructional program of the school.

It is possible that there are other types of linkages between districts and schools than evaluation and influence processes. For example, in the second wave of the study we will want to examine financial connections and the promulgation and enforcement of rules more closely. It is also possible that linkages which are missing in such areas as curriculum supervision may be operative in others, such as personnel matters. However, on the basis of our examination of staffing patterns within the district office and individual schools, we are willing to entertain the proposition that elementary schools exhibit a highly segmented, decentralized structure that places much power with respect to educational decisions in the hands of individual teachers or teacher groups.

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CHAPTER 6

THE DEGREE OF LINKAGE BETWEEN DISTRICT, SCHOOL, AND CLASSROOM

Schools as Organizations

In what respects are schools and districts coordinated organizations, and in what respects are they not? In this chapter we examine the degree of coordination within districts and schools by showing the extent to which these organizations exhibit internal consensus among subordinates and agreement between subordinates and superiors on their policies and practices. We thus see how much the activities and programs of schools are coordinated within district organizations and how much the activities of classrooms are coordinated within schools.

Let us outline the possibilities. Schools and districts could be (a) functionally differentiated coordinated organizations, (b) segmental coordinated organizations, or (c) segmental decentralized organizations.

Functionally Differentiated Coordinated Organizations

In this case, the components of districts (i.e., schools) and of schools (i.e., classrooms) would be highly specialized and independent of one another. Internal coordination and consensus on the operating rules would have to be high. Further, as districts or schools expanded, they would add new subunits that were increasingly highly specialized. This picture is clearly inappropriate in the main, as discussed in Chapter 5, although larger schools and districts may in fact have a little more specialization, and a few may create--for whatever reasons--a certain amount of coordination. Typically, as districts grow they add more schools much like the ones they already have; and big schools are much like smaller ones, but with more classrooms. Specialization,

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coordination, and interdependence are minimal. Schools and districts are not made up of specialized, functionally interdependent segments, but of relatively distinct and functionally similar ones.

Segmental Coordinated Organizations

Schools and districts could, like hamburger chains, be made up of almost identical subunits, all subject to the same policies and procedures. The classrooms in each school and the schools in each district would be alike, not because they were coordinated and interdependent, but because they were almost identical--doing the same work and controlled by the same central authority and the same policies.

This picture of schools and districts as segmental clearly makes some sense. The question is, how similar are the segments--classrooms within schools, and schools within districts? Before examining the data bearing on this question, let us briefly sketch the types of forces that might foster consistency. Four types of forces may be distinguished:

1. If each school or district adopted particular binding technologies of work, consistent patterns of work and structure in each subunit might follow. We mean by technology not "hardware" but whatever curricular materials and instructional practices are used in teaching. Technologies that are highly developed and consistently efficacious in producing desired outcomes are likely to be widely adopted; as a consequence they are likely to impose consistent patterns on the activities of performers and on related work arrangements.

2. If each school or district adopted an educational ideology, a consistent pattern might be imposed on the activities and structures of its subunits. Ideologies--elaborated belief systems relating to the proper role or functioning of a system--can provide normative support for particular work arrangements even in the absence of clear evidence that structures are producing the intended effects. Were a school district to embrace a well-developed educational ideology, we would expect to see consistent patterns of organization in the schools within it.

3. If each school or district had a central point of organizational authority with the right to decide educational policies and to specify procedures for implementing them, we would expect to see high consistency within schools and districts.

4. Finally, if each school or district were confronted by distinct environmental pressures that selected out given structural patterns for survival, we would again expect to see some consistency within districts or within schools.

None of these conditions seems to exist for elementary schools in the United States at the present time. The technology of teaching is notoriously unclear. Educational ideologies certainly exist, but none seems powerful or pervasive enough to dominate public school education. It does not appear that authority to deal with important educational matters exists in any centralized organizational location, whether school or district-wide. (In many countries, a great deal of educational authority is vested in a ministry of education--France is often cited as an example. We have made some observations of Israeli education that also seem to show this type of pattern, as does the English school system, where a great deal of authority is vested in the headmaster or head teacher.) Finally, while environmental pressures may be great in the sense that finances or some idiosyncratic issue may be highly salient, they do not seem to determine particular classroom or school organizational patterns. Thus schools are segmental, and likely to be decentralized.

Segmental Decentralized Organizations

Perhaps in many important respects, the segmentation of school districts permits each school--and even each classroom within each school--to go its own way. In the absence of shared technologies, widely embraced ideologies, centralized legitimated authorities, and determinant environmental pressures, we would expect to find little consistency. Basic educational decisions may be delegated to schools and ultimately to classrooms. This is the hypothesis we examine in

this chapter: Districts and schools are highly segmental and decentralized in many critical educational respects. We are interested in discovering the extent to which schools vary within districts, and classrooms within schools.

Measures of Coordination and Consensus

By means of the analysis below, we want primarily to answer four specific questions:

1. Do principals and superintendents agree in their description of policies and practices?

2. Regardless of their agreement with the superintendent, do principals in the same district report similar policies and circumstances?

3. Do teachers and principals agree in their description of policies and practices?

4. Regardless of their agreement with the principal, do teachers in the same school report similar policies and circumstances?

Since our answers to these four questions tend to be "No," we will conclude that we have evidence supporting the view that the school system is highly segmented and decentralized as an organizational structure.

Two possible objections to this conclusion should be dealt with at the outset. First, it is possible that heterogeneity of school and classroom structure is evidence not for decentralized segmentation but for coordinated and planned diversity. While this situation is currently advocated by some educators, nothing in our data suggests that the diversity that exists is centrally managed. Superintendents responded to a question concerning the relative value they would place on having schools in their district use the same or different reading programs. Sixteen of those responding indicated that they placed high value on heterogeneity; nine placed some value on it; and four placed high value on homogeneity. Educators do seem to value diversity; but a diversity that is neither planned for nor coordinated. Responding

to a question regarding where decisions are made, 27 superintendents reported that decisions on such issues as staff reorganization, choice of reading program, and pupil grouping were made at the school level; and 29 said they preferred it that way. Thus, although heterogeneity may be the ideology of some educators, in our observation this frequently meant autonomy rather than institutionalized coordination of diversity.

A second possible objection is that the lack of consensus and consistency we report may reflect, not real differences between teachers, principals, and superintendents, but simple unreliability in our data. Random unreliability would explain many of our findings. We do not accept this alternative interpretation. Our respondents were not asked to discuss subtle aspects of attitudes or values. We treated them as informants on day-to-day organizational matters, and our questions were usually formulated in language they themselves might use. If in fact they interpreted these questions very differently from each other, we believe the unreliability involved is built into the structure of the school system itself--its rules, policies, and definition of its own activities. Gross and Herriott (1965), in a study of principal leadership in public schools, report that although the unreliability of respondents is usually assumed to be the cause of variance within a class of respondents, they believe that variance among teachers' descriptions of their principals' behavior results from genuine variation in the performance of the principal.

Agreement between Superintendents and Principals

In this section, we report the degree of agreement between superintendents and principals in the same district on a series of issues. We do this by showing the correlation between the superintendent's response and the mean response of the principals in that superintendent's district (four districts have only one principal, whose response is used directly). In one respect, this procedure overstates the level of agreement. As we show extensively in the next section,

principals disagree a great deal within districts. When we relate the superintendent's answers to those of his individual principals, this lack of internal consensus lowers the correlation. However, in this section, we are concerned, not with the reliability of the answers of one of the parties, but with the agreement between parties, and for this purpose the mean principal response is the appropriate analogue to the superintendent's response.

One of the most direct means of unifying the programs and structures of schools within a district is evaluation. The right to evaluate schools, and to hire, evaluate, transfer, and fire principals is vested in the district office (and the school board). How clear-cut are these controls and their effects?

We asked the superintendents how frequently they evaluated the elementary schools in their districts. We asked the principals how frequently their schools were evaluated by the districts. For 30 of our 34 districts, we have both parties' answers to this question. The correlation between their answers was .45, which implies that only about 20 percent of the variation among principals' answers could be accounted for by the superintendents' answers. The two parties, in other words, have little agreement about the most obvious aspect of the evaluation process. Moreover, this was one of the highest correlations to be found in our data.

We asked both parties how many types of information were gathered on schools by the district office for evaluation purposes. In only 18 cases do we have information from both, which itself indicates very low organizational clarity. The correlation between the two parties' answers across these cases was an insignificant .17. We asked both principals and superintendents whether changes in the procedures for evaluating teachers were required by the Stull Act, passed by the California legislature in 1972. Many principals and superintendents said they had changed their procedures, but the correlation between the two sets of answers was only .51 (34 cases).

We also asked principals and superintendents parallel questions about the existence of district policies in certain areas. Two of

these areas were quite specific: we asked, To what extent does the district have formalized policies about (a) pupil grouping and (b) team teaching? We did not ask what these policies were, but simply whether the district had explicit policies in these areas. The answers showed a good deal of variation among districts, and little consistency between principals and superintendents. For pupil grouping, r = .40 (29 cases); for team teaching, r = .53 (30 cases). We also included a more general question of the same sort: Does the district have formal policies in regard to the elementary school curriculum? We might expect less agreement on such a general item, but the level we actually found was extremely low (r = .14, 30 cases) and in fact indicated a statistically insignificant correlation between the answers of principals and superintendents to the same item--whose meaning we still regard as reasonably clear.

We have, in short, no evidence for substantial consensus between principals and superintendents on any of the policy and procedure questions we asked. We should note that the correlations tend to be slightly higher when we consider only principals who have held their positions for more than two years. Principals with more experience in their school agree slightly more with the superintendent's answers--but only slightly. We do not interpret the lack of consensus as reflecting a high level of conflict. Rather, we believe these data reflect low levels of central coordination and/or homogeneity in school districts. Districts exercise very limited controls over the schools within them on matters closely related to instruction, and such controls as they create are undoubtedly applied unevenly.

Consensus among Principals

We can consider the question we have raised in a broader way: Regardless of their agreement with the superintendent, to what extent do the principals in a district report similar organizational worlds? We can examine the variation in the answers of the principals in our sample to see how much of this variation is to be accounted for by working in a given district. Of course, if district location does

account for much of the variation, many explanations beyond organizational consistency are possible, as we have already suggested. Perhaps, for instance, principals in a given district face the same environmental pressures, which lead them to report similar organization. But this procedure at least enables us to get a picture of the extent to which any factors, including organizational ones, generate homogeneity within districts.

We performed a series of one-way analyses of variance using data from principals. For each variable (a school characteristic), we report an F-ratio which defines the statistical significance of the between-district variation in the principals' answers compared with that to be expected on the basis of the total variation (see Table 6.1). Given our large sample, if the between-district variation is insignificant or marginally significant, we can conclude that we have very strong evidence that school districts are segmental, decentralized organizations--with each school more or less going its own way.

Table 6.1 also shows the eta-squared value--a measure of the proportion of variance in principals' answers that can be accounted for by the district in which the principal works. This measure of association can vary between zero and one: a value of one would indicate that all the variation among principals is accounted for by district membership, while a value of zero would suggest that none is. A value of zero, however, is unlikely. Even if principals' answers were randomly distributed among districts, some variations among districts would occur and would appear to account for part of the variation in principals' answers. Given our data, a random distribution of principals among districts would produce an eta-squared value of about .15. We examine the data, therefore, to see how far above this level are the values of the observed coefficients.

Two results shown in Table 6.1 are striking. First, on only 17 of the 33 variables, or about half of the time, did variation among districts significantly account for variation among principals' responses. (If we considered all such data that we have examined,

TABLE 6.1

Analysis of Variance for Principals' Responses

Variable	Source[a]	F-ratio[b]	Eta-squared[c]
General school characteristics			
School size	ES	3.39	.36
Percentage of nonwhite students	ES	14.26	.70
Percentage of teachers with tenure	PQ 6	2.48	.30
Principal's tenure in district	PQ 8	2.78	.32
Number of open space pods	PI 7	2.14	.26
Percentage of teachers teaching jointly	PI 1	1.53	.20
Centralization and the distribution of influence			
Decision-making level: personnel	PI 11a	2.05	.25
Decision-making level: major curriculum changes	PI 11b	1.29	.18
Decision-making level: reading materials, grades 1-3	PI 28	.99	.14
Formalization of district policies on team grouping	PI 14	1.63	.21
Formalization of district policies on pupil grouping	PI 15	3.00	.33
Total district influence on decisions	PI 11	4.62	.44
Total principal influence on decisions	PI 11	.89	.13
Total faculty decision participation	PI 10	1.29	.18
Total teacher decision participation	PI 10	1.79	.23
Total community decision participation	PI 10	2.62	.30
Teachers' organization influence: curriculum	PI 20a	2.89	.30
Frequency of faculty meetings	PQ 10	4.32	.42
Evaluation patterns			
Frequency of district overall evaluation of school	PI 64	3.66	.38
Frequency of reading teacher evaluation, grades 1-3	PI 58	1.27	.17

TABLE 6.1 (Continued)

Variable	Source[a]	F-ratio[b]	Eta-squared[c]
Curriculum (grades 1-3 only)			
Amount of choice provided by reading materials	PI 43	3.23	.35
Variation in pacing (within school) in reading instruction	PI 31	1.71	.23
Variation in reading materials and methods	PI 29	1.68	.22
Special training for reading materials	PI 46	.70	.10
Financial matters			
Total specific district funds for reading given to school	PQ 14	1.70	.22
Number of specific district fundings of school programs	PQ 14	3.26	.35
Number of new positions created with special funds	PQ 16	.69	.11
Staffing			
Number of paid aides	PQ 4	2.66	.31
Number of adult volunteers	PQ 5	1.47	.20
Number of special teachers (FTE) based by school	PQ 1	.94	.14
Number of special teachers (FTE) based by district	PQ 1	2.58	.33
Number of specialists (FTE) funded by school	PQ 1	1.04	.15
Number of specialists (FTE) funded by district	PQ 1	1.92	.26

Note: The results are for about 150 principals in 25 districts. Districts with only one or two schools in the sample were eliminated from the analysis.

[a]PQ indicates the Principal Questionnaire; PI indicates the Principal Interview; ES indicates a state document (External Source).

[b]An F-ratio value of 1.91 is significant at the .01 level.

[c]A value of eta-squared of about .15 is to be expected by chance.

the proportion would be even lower.) Second, even when the between-district variation was statistically significant, it almost always accounted for a minor proportion of the variance in principal answers. Only three of all the eta-squared values indicate that 40 percent or more of the variance was related to district variation--in analyses in which 15 percent of the variance is accounted for by chance. We conclude that the principals in each district were reporting fundamentally different structures--which seem to vary more within districts than between them.

Consider some of the findings in greater detail:

1. Several of the variables that do show significant between-district variation seem to reflect environmental, rather than organizational, patterns. There was more homogeneity within districts on the proportion of a school's students who were nonwhite than on any other variable we examined--evidence that school district boundaries capture a good deal of de facto racial segregation.[1] School size, on which there was also some homogeneity, is shown by other analyses to be related to the urban context of a district. Principals in the same district tended to give similar responses to questions about open space, but this reflects an economic fact (that, in the Bay Area, suburban districts have more often built new, open space, schools) rather than an organizational one. The lack of agreement on the presence of teaching teams--the educational rationale for the construction of open space facilities--shows clearly that the open space finding does not reflect an educational policy commitment of school districts.

2. District funds vary a great deal, and those variables directly related to the district's capacity to buy staff and materials show higher levels of agreement. Thus, tenured teachers and experienced principals were likely to be concentrated in districts with more funds and better pay. Wealthy districts also can pay for more reading materials as well as for aides, special teachers, and specialists.

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[1]The data on ethnicity were obtained from sources outside the school.

It is noteworthy that special teacher positions funded at the district level were more likely to show consensus within districts than those funded at the school level.

3. In only a few areas do district policy variations show up. Districts apparently vary in the frequency of faculty meetings they prescribe; in their rules about grouping pupils, which has lately been the subject of tension in some racially mixed communities; in their frequency of evaluating schools; and in their willingness, or perhaps ability, to fund special school programs. Districts may also vary in the amount of influence exerted on policy decisions by teachers' organizations and community groups.

4. School characteristics such as degree of group influence on curriculum and staffing did not exhibit significant differences among districts. Nor do principals' reports on the participation of various groups in school and district decisions, though districts did vary in the extent to which major curricular decisions were influenced by teachers. Most items show small or insignificant variations among districts. In a few cases, variations in specific district rules, such as hiring and pupil assignment, show up in the data.

5. Despite the fact that consensus within districts is generally low, districts do seem to vary in their participation in and influence on decisions, as reported by principals. This variable shows a higher level of consensus (44 percent of the variation is accounted for by district) than any other such variable in our data. This finding leads us to consider two questions: What factors affect district power over schools? And do districts which have higher levels of power use it to create higher levels of consensus among principals within the district?

Strong districts. In an effort to see which district characteristics led principals to report higher levels of district influence on their decision making, we carried out a series of regression analyses. It should be stressed that we are starting with principals' perceptions of the influence of the district. From a battery of items asking principals about the influence of various parties on a series of

school decisions, an index was created. We analyzed each principal's score on this index, rather than aggregating these scores by district, though the results would not differ greatly.

Table 6.2 shows the simultaneous effects of district characteristics that exhibited interpretable, significant effects on principals' perceptions of district influence. We report below several other variables that did not show such effects.

TABLE 6.2

Multiple Regression Analysis of Principal Reports of Total District Influence on School Decisions

Variable	Source[a]	Beta	F-ratio (4.2 = .05 level)
District context			
Percentage of nonwhite students	ES	.26	3.7
Urbanness (dummy variable: central cities coded high)	ES	-.33	4.6
District resources			
Size of district special administration	SQ 5	.46	5.7
Total district current expenditure per student	ES	-.22	3.9
District authority			
Superintendent's tenure in district	SI 2	.35	19.6
Frequency of school evaluation by district	SI 11	-.21	7.3

Note: These results are based on 148 cases for which all variables were reported.

[a]SI indicates Superintendent Interview; SQ indicates Superintendent Questionnaire; ES refers to state documents (External Source).

The results in Table 6.2 defy any simple description of the school as an organization. Consider the measures of district resources. As we expected, districts which had more special administrators--a category of administrators we previously reported as linking districts and schools (see Chapter 3)--were more likely to be located in districts that principals reported to be more influential. But a more obvious resource measure--district funds, higher levels of which must certainly be related to district discretionary power--showed a negative effect on reported district influence. Next consider two measures of district authority. If a superintendent had been in the district longer, the district was reported to be more influential. This makes some sense: superintendents who have held administrative positions in the district for longer periods probably do have more power. But when we examine the frequency with which the district evaluates the school--a more direct link--we found again a negative effect. Does this mean that more formal evaluation is associated with less control? In this connection note the variable we have called "urbanness," which also has an apparently negative effect on district power. It may be that larger, more "bureaucratized" districts develop sets of rules and procedures which actually limit discretionary district power over schools. The only variable of this kind which showed a positive effect on district power was the proportion of nonwhite students. It may be that districts with many nonwhites are going through changes which lead them to exercise more direct controls over schools.

In any case, the data show few indications that the factors which affect a district's capacity to influence its schools are organizational in character. Other variables we have considered support this conclusion. We included in our analyses two variables which we expected to express the district-school link directly: (a) the frequency with which principals were evaluated by the district, and (b) the reported number of written directives sent by the district to the school. Neither variable showed a significant effect. Here again are two bureaucratic links that apparently have little impact on school decisions.

District-school consensus in influential districts. Do districts that are reported to have more influence create more district-school consensus? The analysis above suggests that reported district power is not a highly organized, bureaucratic phenomenon, and that it is not likely to work in ways that create standardization among principals. We turned again to our data on superintendent and principal agreement to determine whether agreement was higher among principals who saw the district to be more influential. The data offered no support for this hypothesis. In fact, most of the correlations were higher (though not significantly higher) among principals who reported low district influence. This was true, for instance, for all three of our indicators of formalized district policies: team teaching, curriculum, and pupil grouping.

How are we to make sense of these findings? We can dismiss the principals' reports of overall district influence as meaningless, but doing so disregards the answers of the best informants we have to a rather straightforward set of questions. It makes more sense to assume that district influence, in the main, is exercised through channels that are not standardized and codified, and is not built into the nominal system of formal evaluation. The district is a segmental, decentralized organization--its influence on educational matters is exercised idiosyncratically. We can assume that people in the district office--Table 6.2 calls our attention to special administrators--have a number of specific themes and programs in which they are interested and can offer special help. When the opportunity arises, they aid (or perhaps restrict) a given school in creating or altering a program, operating more through personal contacts than through regularized and standardized channels. They do not act to create a district-wide reading program, preferred set of materials, or preferred set of methods, but rather offer suggestions and help on a particularistic basis in an effort to fit a particular local situation.

The comments of experienced educational administrators who insist that their appropriate role is that of a "change agent" who "works

with people" rather than that of an administrator who applies a set of rules should perhaps be taken more seriously. Such a role implies that administrators have little substantive educational authority to direct educational programs. If they are to be effective at all, it is through specific interpersonal skills rather than through administrative, or even professional authority. In a decentralized, segmental educational system, fundamental educational decisions are under the jurisdiction of teachers and, perhaps, principals. The district is there to help, advise, or set limits on the autonomy of schools, but not to administer a standardized educational program.

Agreement between Principals and Teachers

We turn now from a consideration of the relation of principals with their districts to analyze the relation of teachers with their schools. To a large extent, the same intellectual images apply--teachers may be as autonomous within schools, in central educational matters, as schools are within districts. However, for several reasons we might expect a somewhat higher level of coordination within the school than within the district. The teachers are all located on the same physical site and interact with each other and the principal with some frequency; they tend to face the same environmental context both in the outside community and in the physical layout of the school. In addition, it appears that principals, more than district officials, have a certain amount of legitimated educational authority, and may therefore produce a more integrated program.

Using as our source of data the responses of 232 teachers and 16 principals from 16 schools, we examine first the level of agreement between the principal and the average response of teachers in the same school to similar questions.[2] To aggregate the responses of teachers

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[2]Of our 232 teachers, 201 reported teaching in grades 1-3. Only data from these teachers are reported below when we are comparing teachers' and principals' answers to questions about grades 1-3. It should be noted that all these comparisons are between aggregated teachers' reports on their own classrooms and principal reports about grades 1-3 generally.

in this manner produces higher correlations than would be found between individual teachers and their principal because, as we show at length in the next section, there is great variation among teachers within schools. However, in the present analyses, we are concerned with the overall agreement between two organizational positions: principal and teacher.

The pattern of results follows that of the principal-district analysis, although some of the correlations are higher.[3] It should be noted that the results of this analysis are less stable because they are based on a much smaller number of cases (16 schools, as compared to 34 districts). Although we would have more cases and, hence, more stability were our analysis to be based on individual teachers, this approach would mix principal-teacher disagreement with teacher-teacher disagreement, and we seek to avoid this source of variation in the present analysis.

The results can be readily summarized:

There is a fair amount of agreement about the characteristics of the environment. The correlation between the average response of teachers and the response of their principal to a question about the economic level of the pupils' families was .50. This figure is not high, compared with our expectations for agreement on this type of item, but it is one of the highest values observed in our measures of agreement.

Issues involving money reveal greater agreement between teachers and principal, presumably because the principal tends to find out what teachers are doing through budget-related processes. We asked both teachers and principals how many paid teacher aides were present in a typical instructional period in grades 1-3. The correlation was .93. In contrast, their agreement on the number of adult volunteers typically present for reading instruction in grades 1-3 was only .21. The difference may be that adult volunteers are, of course, unpaid, and

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[3] With 16 cases, a correlation of .42 is significant at the .05 level.

their presence is (a) less likely to be standardized across the school and (b) less likely to be of intimate concern to the principal.

The same theme comes up throughout our data in connection with educational materials. Principals know a good deal more about materials used in their schools than about teaching methods or forms of classroom organization, presumably because materials are purchased from the school budget and are typically obtained through requests to the district office, channeled through the principal's office. Thus, for example, the agreement between teachers and principals on the extent to which pupils used different materials in a typical reading instruction period was .63. In contrast, agreement on classroom organization in a question asking how often reading group membership changed over time was only .09. And agreement on teaching methods in a question asking who generally decided what methods to use in teaching reading was only .09.

As a more general measure, we combined several of the principals' answers to questions about reading materials into an index of materials differentiation (discussed in detail in Chapters 3 and 4). The object of the index was to measure the extent to which the available reading materials offered complex alternatives to teachers and students. The teachers were asked a somewhat similar set of questions about their own materials. The two sets of answers are correlated .41, again suggesting at least some correspondence between the two parties on a matter in which funds are involved.

Apart from items related to environment and funds, agreement between principals and teachers was very low. The principals' reports on overall parent participation in decision making was correlated only .20 and -.20 with two items asking teachers about parent influence on lesson content and discipline. Teacher reports of the principal's helpfulness with generating new teaching ideas was correlated with principal reports of influence on curriculum .50 and on teaching methods .29. And, as with the district-school data, agreement on the evaluation system within schools was low (.21).[4]

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[4]Principals were asked how often they evaluated reading teachers in

When we consider principal and teacher reports of influence on decision making within the school, we again find mostly low levels of agreement. Agreement on the principal's influence on pupil assignment and handling of serious discipline problems was only .28 and -.08. Agreement on the teachers' influence on pupil assignment was higher, .67, but for discipline it was only .13.

Overall, these findings are quite similar to those relating the answers of principals to the answers of superintendents. The general level of agreement between principals and teachers on educational matters is low, although higher than principal-superintendent agreement. Again, it would be a mistake to regard these data as suggesting a high level of conflict--we have no evidence for this interpretation. Rather, our findings are consistent with the suggestion that principals and teachers are separated by jurisdictional boundaries. They agree in general on their roles, but they seem to have little agreement on specifics within each school. They also apparently agree that what each one does within his jurisdiction is by and large not the other's business. And, they apparently agree that their jurisdictions do not overlap very much.

Consensus among Teachers

Leaving aside their agreement with the principal, do teachers in the same school report the same organizational world? In order to investigate this issue, we performed a series of one-way analyses of variance to see if variation among schools (N=16) accounted for a statistically significant proportion of the overall variance among the 232 teachers, and also to see what proportion of the variance could thus be accounted for. To deal with the first issue, we report the F-ratio

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grades 1-3. Teachers were asked an overall question about the frequency with which the principal evaluated their subject matter teaching. Perhaps because the two questions differed, the correlation between the principal answers and the averaged answers of the teachers was -.20.

associated with between-school variation.[5] To deal with the second issue, we report values of eta-squared. Again, the reader should bear in mind that this is a biased measure of the variance accounted for by the school, since even if our teachers' answers were randomly distributed among schools, a typical eta-squared value of .08 would be produced.

The results shown in Table 6.3 conform to the familiar pattern. Between-school variation (or within-school consensus) is greater, in general, than the comparable measures at the district level shown in Table 6.1, but in most respects it is quite low. In only one instance is the proportion of variance among teachers accounted for by their school as high as .50. More often, the value is extremely low.

The specific interpretations that can be made generally conform to our earlier findings:

1. Agreement about environmental features was fairly high. Sixty-six percent of the variation in teacher reports of open space classrooms was accounted for by school membership. Twenty-nine percent of the variance in reported pupil family economic level was shared within schools.

2. Variables that reflect funding differences among schools had fairly high agreement. There was some agreement on the amount of variation in materials for math, reading, and social studies, presumably because richer districts or schools can buy more. Similarly, there was considerable agreement among teachers on the presence of aides for reading--more agreement than on the presence of unpaid volunteers.

3. For the first time in our data, we found clear examples of explicit interdependence within schools. The teachers, to some extent,

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[5]The numbers of teachers answering the questions varied, from 180 to the maximum of 232, because some questions were inappropriate for particular groups of teachers. Consequently, the level of statistical significance indicated by a given F-ratio varies slightly. We use a conservative definition in Table 6.3: an F-ratio of 1.98 is significant at the .05 level for any of the analyses reported here. In some instances with more cases, an F-ratio of only 1.74 would be significant at the same level.

TABLE 6.3

Analysis of Variance for Teachers' Responses
(N=232 teachers, 16 schools)

Variable	Source	F-ratio[a]	Eta-squared[b]
General school or classroom characteristic			
Teach in an open space classroom	TQ 6	23.18	.66
Number of aides in a typical reading class	TQ 59	13.88	.50
Number of volunteers in a typical class	TQ 59	6.04	.30
Family economic level of pupils	TQ 72	5.93	.29
Interdependence within school			
Frequency of cross-grouping pupils in math	TQ 10	9.17	.40
Frequency of cross-grouping pupils in reading	TQ 10	5.84	.30
Frequency of cross-grouping pupils in social studies	TQ 10	2.84	.17
Member of a teaching team	TQ 16	12.83	.47
Degree of teaching collaboration	TQ 15	10.07	.42
Team meeting frequency	TQ 23	2.73	.29
Curriculum and methods			
Most frequently use whole-class method: math	TQ 12	3.65	.31
Most frequently use whole-class method: reading	TQ 12	3.01	.32
Most frequently use whole-class method: social studies	TQ 12	.99	.07
Frequency of ability grouping in math	TQ 13	1.22	.09
Frequency of ability grouping in reading	TQ 13	2.02	.14
Frequency of ability grouping in social studies	TQ 13	1.73	.15
Amount of variation in math materials	TQ 34	5.03	.27
Amount of variation in reading materials	TQ 34	6.65	.32
Amount of variation in social studies materials	TQ 34	3.37	.21

TABLE 6.3 (Continued)

Variable	Source	F-ratio[a]	Eta-squared[b]
Curriculum and methods (continued)			
Frequency students choose materials: math	TQ 35	1.19	.08
Frequency students choose materials: reading	TQ 35	1.94	.12
Frequency students choose materials: social studies	TQ 35	2.07	.13
Influence and evaluation			
Influence of district policies: discipline problems	TQ 46	1.57	.19
Influence of district policies: lesson content	TQ 44	2.12	.26
Principal's influence on lesson content	TQ 44	2.43	.16
Principal's influence: pupil assignment	TQ 49	3.25	.19
Faculty's influence: pupil assignment	TQ 49	4.26	.24
Teacher's influence: pupil assignment	TQ 49	4.84	.27
School policy influence: student conduct	TQ 50	2.27	.15
School policy influence: curriculum	TQ 51	2.85	.18
School policy influence: evaluation of students	TQ 52	.73	.05
Parent influence: lesson content	TQ 44	2.29	.15
Principal's evaluation frequency: teaching subject matter	TQ 62	2.39	.15
Principal's evaluation frequency: class control	TQ 62	1.96	.12
Principal's evaluation frequency: record keeping	TQ 62	2.13	.13

[a] An F-ratio value of 1.98 is significant at the .01 level.

[b] A value of eta-squared of about .08 is to be expected by chance.

agreed on whether they were team members, how much teacher collaboration there was, how frequently teams met, and how frequently they cross-grouped students.

We also found some agreement on whether the whole-class method of instruction was used in math and reading. This finding may reflect school policies, but may also reflect the fact that some of these schools are open space, while others are not. The whole-class method is less commonly employed in open space schools, and is in some respects ill suited to them.

4. On most organizational and educational matters, there was little agreement. Even given some agreement on variation in materials, there was little agreement within schools on whether pupils chose their materials. There was also little agreement on the practice of ability grouping. And agreement on the whole battery of measures of influence and power within the school was very weak, considering that the teachers are here reporting, not their individual practices, but schoolwide patterns, as they see them. In most of these instances, agreement is statistically significant (in part because of the large number of teachers and the small number of schools), but substantively unimpressive. We can note, finally, that agreement on patterns of teacher evaluation--putatively a main method of control--was almost non-existent within schools.

The results of these analyses conform to our earlier findings about agreement among principals. Agreement was highest in response to obvious environmental circumstances or funding arrangements. Although teachers did agree in describing a few areas involving interdependence, by and large each teacher seemed to experience the organization from the viewpoint of an autonomous agent.

Consensus among interdependent teachers. Do interdependent teachers show more consensus? The finding that teachers tend to agree in describing areas of obvious interdependence suggests an additional hypothesis. Perhaps teachers who work interdependently show more within-school agreement than other teachers. Interdependent teachers

are more involved in the school organization as opposed to the isolated world of the classroom, and might routinely be able to describe consensually some processes that are irrelevant to other teachers.

As a simple measure of interdependence, we divided the teachers into two groups depending on whether they reported being a member of a team. Eighty-five teachers in 13 schools reported being on teams, and 110 in 13 schools said they were not. The analyses of variance reported above were repeated separately for the two groups. In this way, we could determine whether more variation was accounted for by school membership among teamed teachers than among unteamed teachers.

The results offer some encouragement. On a number of items, teamed teachers showed higher levels of consensus. They agreed more than independent teachers on the degree of school influence on discipline patterns (eta-squared = .37 as compared with .07) and curriculum (.30, .09); on the degree of influence of the principal (.31, .21) and the community (.36, .24); on the sharing of materials (.53, .25); and on the cross-grouping of pupils for reading (.45, .15). On most other items, however, differences were smaller or nonexistent. By and large, these analyses suggest that higher levels of teacher interdependence generate somewhat more agreement on organizational rules.

When we classified the schools by the frequency with which the principal reported that teachers engaged in joint teaching, however, these effects did not occur: schools reported as collaborative showed little more teacher agreement than noncollaborative schools.

We also entertained the hypotheses that more agreement within schools might be found if the school organization was stronger in either of two respects: (a) the principal reported himself to be influential in many aspects of school life, or (b) the principal reported high levels of participation in school decisions by both himself and the teachers. Schools high on these variables, we thought, might have more explicit and better enforced rules with which every teacher would be familiar. Consequently, we repeated our analyses of variance separately for schools classified as low and high on these variables. Few

consistent differences were found when schools were distinguished according to "principal power." When schools were distinguished by levels of teacher participation in school decisions, those with more teacher participation showed some tendency to have more policy agreement among the teachers, though the differences were not large.

The results of these exploratory analyses suggest that it may be profitable to look further for higher levels of organizational coherence among schools that have more teacher participation and more teacher interdependence. However, even the most positive of these results do not show high levels of agreement among teachers in describing the facts of organizational life. Even the most interdependent schools rarely show levels of agreement in which between-school variance accounts for as much as 40 percent of the variation among teachers' responses to our questionnaire.

Conclusions

We can summarize our findings very simply:

1. Overall agreement between principals and superintendents in describing district organizational and educational policies is quite limited.

2. a. Agreement among principals in describing district rules or educational policies is very low.

   b. The more influential district offices do not exercise their influence through regular vertical bureaucratic channels and do not impose greater uniformity on their schools.

3. Overall agreement between teachers and principals in describing district policies is usually rather limited (though higher than that between principals and superintendents).

4. a. The teachers within a given school agree relatively little in describing school and classroom policies (though more than principals within districts). Agreement is somewhat higher in reporting on the environment, matters connected with funding, and areas of obvious interdependence.

   b. Teachers who are more interdependent agree somewhat more than independent teachers in describing school policies and practices.

These findings are surprising because they concern reports about organizational rules and practices, not private attitudes. The school system as an organization appears to have extremely weak links in many areas. We interpret these results as showing the extent to which both district and school organizations are not only highly segmented, but also highly decentralized.

The discussion above and our major findings apply to the central educational activities of schools. In other areas it may be that schools and districts are more consistent in their organizational pattern. The environment creates clear fiscal constraints, and pressures exist for the equitable distribution of resources among schools and teachers. The technology of education is limited, but children can be counted and must be kept track of. Children can be evenly distributed among teachers and authoritatively assigned to particular teachers. They can be classified by age, and must usually be processed through the school in a definite age-related sequence of grades. Similarly, the maintenance of buildings and the keeping of records can be standardized. Thus in many aspects--mostly peripheral to the main work of instruction, though perhaps impinging on it--districts and schools are similar in their organizational characteristics.

Consider the things we did not ask, on which we would expect to find high agreement within school systems. Among principals within districts and between principals and superintendents there should have been high agreement on:

--the school and district per-student budget
--the principal of a particular school
--the geographical lines defining the attendance area of a particular school
--the pay of a teacher with given experience and credentials
--the number of pupils assigned to each teacher
--the number of grades taught in a given school
--the number of schools in the district.

The district system effectively organizes the existence of each school and the allocation of pupils, teachers, principal, and funds to it.

The district organizes funds, personnel, and buildings, and delegates education to the intersection of these categories.

In the school, similarly, there would be great agreement on questions we did not ask:

--Who is and is not a teacher?
--Which teacher is assigned to each room and grade?
--Who is or is not a student, and to which grade and teacher is a given student assigned?
--Who is the principal?

Schools, like districts, organize personnel and classrooms. The central educational activity is delegated to these subunits.

This discussion suggests that in regard to personnel, buildings, boundaries, and funds, school systems are indeed explicitly organized. In these respects they appear to be segmented but coordinated organizations.

Nevertheless, in important respects the school system is not an organization at all, as that term is traditionally defined. The bulk of the educational work devoted to the main purposes of the system is apparently decentralized beyond the system's purview. Many observers have noted the inattention to educational matters and the focus on peripheral "bureaucratic" issues which seem to characterize school and district organization. This could reflect, not a process of goal displacement, or even a distinction between the "real" and the proclaimed goals of educational organizations, but a situation in which the organization qua organization is limited, with some activities organized and others decentralized or delegated. In short, the school system is not only segmental and decentralized, but is a partial organization. It is an organization that only partially structures activities related to its main goals.

How does the educational system legitimate the delegation of its main activities to only partially controlled subunits--in practice, teachers? And why is it that we have no sense that the entire enterprise is near to collapse? Although the organization of the school is only partial organization, and although we have observed great

variability in educational procedures and arrangements even within the same school, let alone the same district, we have not noted high levels of conflict or disorganization. How can this be?

We can only hint at the direction in which answers to such questions may be sought. It must be the case that important components of the school system rest on social understandings which themselves rest on a set of widely recognized and, hence, highly institutionalized social roles. Competent members of our society "know" what a school, a student, or a teacher is, and what are the appropriate purposes of each. Competent members also know the age-grading and subject-classification procedures of schools. These and similar understandings are, in a sense, a given in the school context, and these definitions of social reality must greatly stabilize and justify the operation of the school. The school also functions on the basis of other agreements among a more narrowly defined set of participants that include school administrators, board members, teachers, and some highly involved and supportive laymen. These agreements are related to the necessity of employing certificated personnel, the importance of proper credentials, the prerogatives of teachers in their own classrooms, and the role of principals in parent-teacher conflicts. These definitions of social reality are also widely shared by the most interested and involved participants in school systems.

Much of the everyday functioning of schools as organized (but not necessarily organizational) systems is supported by such widely shared understandings among the relevant participants. Third graders study, and are taught by teachers, subjects like math and reading. These are activities which everyone knows must go on. Thus even though nobody in the superintendent's or principal's office directly enforces these activities, they go on anyway. (Presumably, the organizational system would rumble into action if it should be alleged that such activities were not in fact going on.)

The segmental, decentralized, partial organization of school systems is thus made possible by societal definitions of reality.

Other kinds of organizations must also rely to an enormous extent on their environments for many elements missing from their structures.

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CHAPTER 7

ORGANIZATIONAL SUPPORT FOR THE TEACHER'S ROLE

Introduction

The Environment for Teaching Program has long been concerned with the lack of organizational support for the elementary teacher's role. Several of the program's studies have provided empirical confirmation of the common sociological generalization that elementary school teachers function in isolation from each other and from the principal (Magnani, 1970; Meyer & Cohen, 1971; Marram, Dornbusch, & Scott, 1972). The Meyer and Cohen study of teamed teachers in open space schools investigated whether or not these organizational and architectural features would produce changes in the work and the isolation of the classroom teacher. The present study allows us to explore additional aspects of this question.

Consequences of Teacher Interaction and Interdependence

Meyer and Cohen found that team teaching in open space did indeed represent a marked increase in collegial interaction. Teamed teachers in open space schools interacted with each other much more than the comparison group of non-teamed teachers in conventional classrooms; they were also markedly more satisfied with their jobs. It is, however, critical to point out that the increased interaction did not relate directly to teacher satisfaction. Only those team teachers who reported a high degree of influence over other teachers (on their teams), in addition to a high level of interaction, reported increased satisfaction. Even in this first study we began to see that the increased interdependence brought about by teaming carried with it a special set of problems; some team interaction was not at all satisfying, and some

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team members felt neglected or taken advantage of by their teammates. Many of the interaction-related problems we suspected in this first study were confirmed by Molnar's systematic observation of teacher team meetings (Molnar, 1971).

The data gathered in the present study allow us to pursue the question of the effects of increased collegial support for the classroom teacher. The earlier study of interaction in open space and self-contained classrooms was limited by its design, which confounded the effects of open space and the effects of teaming. In the present study we have approximately equal numbers of teams in self-contained classrooms as in open space settings. Moreover, the earlier study was confined to middle-class suburban schools; the present sample contains a much wider range of socioeconomic status. Finally, at the time of the earlier study, open space schools were still relatively new, causing us to suspect that some portion of the high degree of teacher satisfaction in this setting was due to being associated with an exciting educational innovation. The passage of time has undoubtedly diminished the "innovation effect" of working in open space.

On the whole, our studies of teaming in open space led us to conclude that reducing the isolation of the teacher could lead to favorable working conditions. However, we were quite aware that we did not understand the difference between the circumstances in which greater collegial interaction and interdependence could lead to teacher satisfaction and those in which they would lead to unhappiness. Practitioners commonly explained the critical difference as the personalities of team members, but our more sociological approach to the study of schools led us to hypothesize that the critical features lay in the way the teachers worked together and the nature of the tasks they undertook together.

Our sample allowed us to pursue the question of the relation of teacher satisfaction to changed working relationships between teachers with a design and a questionnaire that provided data especially rich in information on how teams work together. In this analysis we can

separate the effects of teaming from the effects of open space. Furthermore, we can see whether patterns of collegial interaction are related to teacher satisfaction in lower SES schools in the same manner as in higher SES schools.

Principal-Teacher Relations

Previous research provides more grounds for the importance of collegial relationships as a source of teacher satisfaction than for the importance of a close working relationship between teacher and principal. However, if the traditional isolation of the classroom teacher can, under certain conditions, be changed satisfactorily through collegial support, it may be argued that changes in the role of the principal can also serve to support the role of the classroom teacher. Although some previous organizational studies have suggested that close supervision by superiors may be related to increased interpersonal tension and lack of satisfaction of workers (e.g., Gouldner, 1954), most teachers are much more isolated than the average worker, and they may therefore be much more likely to welcome any form of adult contact, including contact with the principal.

The present study offers specific indicators of ways in which the principal may attempt to control, guide, and support the classroom teacher's role. He may exercise impersonal contact by means of school policies, or more personal supervision through frequent observation or evaluation of teachers; he may also support teachers in various task-related areas. Using these indicators of the principal's role, we can examine the association of what we loosely call "vertical integration" in the organization with our measure of teacher satisfaction.

In review, this chapter focuses on the conditions under which intensified relationships among teachers and between teachers and the principal are associated with teacher satisfaction, or, to put it another way, on the extent to which variation in satisfaction responds to variation in organizational conditions in the school. In presenting the analysis of the data we will first examine the unconditional association of the collegial relationship of teachers and teacher

satisfaction. Similarly, we will look at the association of the degree of vertical integration of the school and teacher satisfaction. Following these simple analyses we will move on to the conditionalized form of our hypotheses, where we examine the same relationships under conditions of more and less task interdependence. Likewise, we will examine these same relationships for schools varying on socioeconomic status. Because of a persistent interest in what happens when teachers work more closely together, our interpretation will focus on organizational predictors of high faculty morale under conditions of increased task interdependence of the teachers. We will speculate on why teacher morale appears to have different sources in low socioeconomic status schools. Finally, we will summarize implications of increased task interdependence for the principal's role.

Reducing the Isolation of the Teacher and Staff Morale

Building on what we have learned about the beneficial effects of diminishing the isolation of the classroom teacher, we propose to test the simple idea that those teachers who experience close collegial relationships and close working relationships with the principal will be more satisfied with their schools than those who experience weaker relationships. We have two unconditionalized propositions:

> Closer collegial relationships among teachers will be positively associated with satisfaction with the school.
>
> The reported level of vertical integration between teachers and principals will be positively associated with satisfaction with the school.

Indices of Collegial Relationships

We will use collegial interaction and the informal system of teacher evaluation as indices of collegial relationships.

Interaction. There is marked variation in the collegial relationships among teachers. Some teachers are so isolated that they do not even report talking frequently to other teachers about professional

matters. We include two indices of collegial interaction: the frequency with which teachers discuss their teaching, and the frequency with which they share instructional materials.

Evaluation. We are concerned not only with collegial interaction, but also with the way in which teachers evaluate each other. In earlier studies we found that under conditions of increased interaction, some team members frequently evaluated each other's performance and came to favor the development of a formal system of teacher evaluation (Meyer & Cohen, 1971; Schiller, 1972). If there were to develop a formal system of teacher evaluation (which is rare in our experience), the elementary school would be characterized as showing increased lateral integration. In the case of this sample, however, we are only examining an informal system of teacher evaluation, possibly as forerunner of the potential lateral integration of the elementary school staff. Indices of teacher evaluation include its frequency and helpfulness.

In review, the indices of collegial relationships are as follows (question numbers in parentheses refer to items in the original questionnaire):

Collegial Interaction

Frequency of teacher discussion (Q58)
Frequency of sharing materials (Q53)

Teacher Evaluation

Frequency (Q63)
Helpfulness (Q67)

Indices of Vertical Integration

Chapter 6 of this report has drawn a picture of the elementary school as an organization with relatively little vertical integration. Past studies have shown that teachers report principal evaluation infrequently.

There are several different ways principals can play their role so as to supervise and control teachers. The first way is through the

relatively impersonal method of administering a general policy on student discipline, curriculum, and student evaluation. The policy might originate with the principal or it might be developed jointly by the teachers and the principal. Second, principals can personally supervise and evaluate teachers. Third, principals can support their teachers in such task-related areas as special projects, discipline, and parent relations, and by providing opportunities to develop new teaching ideas. We have labeled these three ways in which principals can increase vertical integration of the school as "Impersonal Control," "Personal Supervision," and "Principal Support."

The questionnaire includes several items measuring each of these three facets of the integration of the teacher-principal relationship:

Impersonal Control

Degree to which school policies govern discipline, curriculum, and student evaluation (Q50, 51, 52)

Personal Supervision

Frequency of principal observation (Q56)
Frequency of principal evaluation (Q62)

Principal Support

Helpfulness of principal in providing opportunities to develop new teaching ideas, e.g., through in-service training or visits to other schools (Q61)
Helpfulness of principal in backing up the teacher on disciplinary matters (Q61)
Helpfulness of principal in supporting special projects (Q61)
Helpfulness of principal in parent relations (Q61)

The Sample of Teachers

For the analysis in this chapter, we are using data from questionnaires given to all teachers in 16 elementary schools in the San Francisco Bay Area. As noted before, these schools are part of our larger stratified random sample of schools and principals. These 16 schools were selected from the larger sample on the basis of the principals' responses to initial questionnaires in an attempt to maximize variation in teaming, in the use of specialists, and in reported instructional

practice. Only schools with a grade range of K-6 were considered. There were 46 self-proclaimed teaching teams in both self-contained and open-space schools. A total of 232 individual questionnaires were returned by teachers, a response rate of about 95 percent.

Teacher Satisfaction

It is dangerous to assume that teachers look at schools in the same way sociologists do. In the preceding chapters we have emphasized that schools and districts are not integrated organizations. In doing so, we are implicitly comparing schools with other organizations. When teachers evaluate their satisfaction with the schools in which they teach, they probably compare their school with other schools rather than with hospitals or businesses. Unless we remember this, we are likely to conclude that working in an organization as poorly integrated as the school will result in low staff morale. Our analysis of the responses to the questionnaire item on satisfaction with school shows no such effect.

Most of the teachers in our sample are quite satisfied with the school in which they work. In response to the question: "In general, how satisfied are you with the school in which you presently teach?" (Q74), 67 percent of the sample chose "extremely" or "very" satisfied as their answer; 26 percent were "moderately" satisfied; and only 6.6 percent were "slightly" or "not at all" satisfied.

Satisfaction with school is strongly associated with satisfaction with teaching as an occupation. This means that the variable we have chosen to analyze has many global and diffuse elements connected to the concept in the respondents' minds. Previous studies of the job satisfaction of teachers have shown that the level of satisfaction is generally high and that the satisfaction of female elementary school teachers is particularly high. This last finding may well be a function of the tendency of women teachers to compare themselves with other women of equal education who have had restricted employment opportunities, rather than to compare themselves with men of equal

education who may hold higher status jobs (Cohen, 1967). In the present sample of 232 teachers, all but 31 are women.

Collegial Relationships and Satisfaction

If we examine zero-order correlations between indices of collegial relationships and teacher satisfaction, we find some significant relationships of both degree of collegial interaction and helpfulness of teacher evaluation with satisfaction. Table 7.1 shows that the frequency of teacher discussion and the frequency of sharing materials are correlated positively with teacher satisfaction. Although frequency of teacher evaluation is not associated with satisfaction for the sample as a whole, the perception of the helpfulness of those teacher evaluations is related to satisfaction with school.

TABLE 7.1

Correlations between Collegial Relationships and Satisfaction with School

Indices of Collegial Relationships	r (N=232)
Interaction	
Frequency of talking with other teachers	.12*
Frequency of sharing materials	.26***
Informal Evaluation by Teachers	
Frequency	.09
Helpfulness	.20***

*p < .05
***p < .001

A multiple regression with these same variables shows a very low percentage of variance explained: $r^2 = .06$. The only significant predictor of satisfaction is frequency of sharing materials (beta = .19, $p < .01$). Helpfulness of teacher evaluation also has some independent effect, but it is not strong enough to reach significance (beta = .12).

Vertical Integration and Satisfaction

It is clear from Table 7.2 that teachers who report more frequent principal evaluation and observation are more likely to report being satisfied with their school. Even more powerful is the observed association between reporting that one's principal is supportive in a wide variety of tasks and satisfaction with one's school. The only school policy that is related to satisfaction is a schoolwide policy on discipline.

TABLE 7.2

Correlations between Vertical Integration and Satisfaction with School

Indices of Vertical Integration (Principal-Teacher Relationship)	r (N=232)
Impersonal Control	
School Policies (composite score)[a]	.06
Discipline	.19**
Evaluation of students	.03
Curriculum	-.06
Personal Supervision	
Frequency of principal observation	.18**
Frequency of principal evaluation	.26***
Principal Support	
Principal Support (composite score)[a]	.46***
Teaching ideas	.38***
Discipline back-up	.41***
Special projects	.37***
Parent relations	.39***

**p < .01
***p < .001

[a]Composite scores were calculated by averaging the normalized component scores.

A multiple regression analysis shows that about 25 percent of the variance in teacher satisfaction is explained by the variables in Table 7.2. As might be expected, the variables measuring principal support are the strongest predictors of teacher satisfaction. The two most important are the perceived helpfulness of the principal in back-up on disciplinary matters (beta = .24, $p < .01$) and the perceived helpfulness of the principal in providing opportunities to develop new teaching ideas (beta = .18, $p < .01$). The indices of impersonal control and of personal supervision show no significant independent effects, except for a negative effect of curriculum policies on teacher satisfaction (beta = -.15, $p < .01$), which suggests that curriculum policies may be thought to interfere with teachers' professional autonomy. The weakened effects of discipline policies and frequency of principal evaluation and observation in the multiple regression may be due to their correlation with the variables measuring principal support ($r = .30$), which may have a confounding effect.[1]

Conditionalizing the General Prediction

It would be naive to think that closer working relationships will predict teacher satisfaction under all conditions. Our past studies revealed that collegial relationships with other teachers are sometimes unwanted, as when teaming is forced upon the staff. Some teachers seem to prefer the isolated classroom and some teachers are clearly unhappy with their particular teams. While teaming may bring about increased collegial interaction, having to take each other into account in their daily activities can generate new problems and staff needs that may or may not be met.

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[1] When the control and supervision variables are analyzed separately, without the principal support variables, the betas are significant and independent for frequency of principal evaluation (beta = .20, $p < .01$), school policies on discipline (beta = .21, $p < .01$), and curriculum policies (beta = .23, $p < .01$).

Similarly, we are aware of the general feeling of suspicion and fear concerning formal evaluation by principals. Many teachers feel that the principal's evaluation is not based on important samples of their teaching skill but on peripheral matters such as the bulletin boards, the orderliness of the classroom, and the efficiency of the teacher's record keeping. Marram's study (1971) reveals that the perceived legitimacy of the evaluation system in schools is weak compared to that among nurses in hospitals. However, it also shows that the legitimacy of the school evaluation system is markedly improved in the view of teamed teachers working under conditions where the principal can readily see them (as in the open space school).

There are two major conditions under which we hypothesize that the relation between increased staff relations and satisfaction will vary. The first condition is task interdependence among the teachers, and the second is the socioeconomic status of the school. The specific hypothesized effects of these conditions are explained below.

Task Interdependence among Teachers

Theoretically, the concept of task interdependence refers to the degree to which one worker has to take another into account when doing a job. In the case of the traditional structure of the elementary school, there is an extremely low level of task interdependence. When teachers are formed into teams, they meet occasionally, at a minimum, and do some joint planning, thereby increasing their task interdependence relative to non-teamed teachers. However, Bredo's analysis of teaching teams has taught us that there is wide variation in task interdependence among teachers who call themselves "teams." Some actually teach jointly, conducting lessons for a common group of students. Others merely divide up the students by ability and send some or all of them to another teacher for a particular lesson. This is referred to as "cross-grouping" and once the initial decisions about grouping and scheduling are made, the teachers do not have to take each other into account very much. Thus we see cross-grouping as indicating

less task interdependence than joint teaching when we analyze data from teamed teachers.

In addition to teaming and the manner in which teams work together, still a third index of task interdependence is working in open space vs. working in a self-contained classroom. Teaming in open space necessarily involves considerable interdependence. First, there is the simple physical fact that if some teachers allow their students to become noisy or to move about the open space pod with great freedom, the teaching space of other teachers is invaded and disturbed. Second, where such disturbance is consciously kept to a minimum, teachers will need to take other teachers and their student groups into account in planning and conducting their own group's activities.

In review, we will use the following indices of task interdependence:

Teaming (Q16)

Frequency of joint teaching (Q26)
Frequency of cross-grouping (Q10)
Work in open space vs. self-contained classroom (Q6)

Why do we feel that increased task interdependence constitutes such an important organizational change in the work of teaching? In the first place it bears an important relationship to complexity in instructional practice; more interdependent teams are associated with more complex forms of instructional practice (see Chapter 4). Second, interdependence is not an unmixed blessing from the worker's point of view. At the same time that it brings more potential support to the teacher's role from colleagues, it makes extra demands on the teacher's time, increases the risk of unsatisfying interpersonal interaction, and increases the need for coordination and consensus. Thus we did not predict that increased interdependence would bear a direct relationship to satisfaction; there are too many new ways in which teachers on teams could become dissatisfied. Highly interdependent teams may require some additional support in order to function smoothly. The elementary school organization may have to become more tightly integrated in order to provide the needed support for interdependent teaching

teams. If this is the case, then organizational measures of integration should relate to measures of staff morale very differently when teachers work more interdependently; they should take on greater importance for teacher satisfaction than in the traditional work structure.

Two ways in which the school staff could become more integrated are through the informal method of collegial evaluation that we sometimes find in schools and through a change in the principal's role owing to vertical integration. We predict that the original proposition examined above concerning vertical integration and satisfaction will hold more strongly for interdependent teachers; likewise the above proposition concerning the informal evaluation system among teachers as a predictor of teacher satisfaction will work more powerfully when teachers work interdependently.

> Under conditions of increased interdependence, the importance of teacher evaluation and vertical integration for teacher satisfaction will increase.

The reasoning behind this hypothesis is that informal teacher evaluation and the indices of vertical integration constitute ways to solve the problems that arise from interdependence. As long as teachers function in isolation, these variables are not highly important to their satisfaction; but if they are interdependent and the problems of integration are not solved, then there should be major grounds for dissatisfaction with the school.

This hypothesis is tested using three different sets of variables to measure interdependence: teaming versus no teaming; teaming in open space versus teaming in self-contained classrooms; teaming with a high frequency of joint teaching versus teaming with a high frequency of cross-grouping.

Socioeconomic Status of the School

The socioeconomic status of the students in a school should affect the way collegial relationships and vertical integration relate

to satisfaction. We do not know specifically how this relationship differs between lower and higher SES schools, but we do have some empirical grounds for suspecting that lower SES schools represent a different kind of organization with respect to our antecedent and consequent variables. For example, only 58 percent of the teachers in low-SES schools in the sample describe themselves as "extremely" or "very satisfied" with their schools, whereas 77 percent of the teachers in high-SES schools describe themselves as satisfied to this degree. It also appears that higher status schools show more vertical integration on many indices than do lower status schools.

Because lower SES schools exhibit lower levels of teacher satisfaction and vertical integration, we supposed that integration and satisfaction might be related differently in schools with different socioeconomic class composition. Furthermore, higher and lower SES schools face different tasks in terms of the learning problems of their clients. The greater difficulty of the teaching task in lower SES schools may also be a reason for different relationships between organizational variables and teacher satisfaction. However, our analysis of such relationships under different SES conditions is, on the whole, frankly exploratory.

Interdependence: Effects of Teaming

It will be recalled that teaming is considered an index of interdependence among teachers. We predicted that indices of both teacher evaluation and vertical integration would be more closely related to satisfaction when the teacher reporting was a team member, because sources of support and coordination become more important when interdependence increases. Table 7.3 shows that helpful evaluation by other teachers is related to school satisfaction for teamed teachers only. This finding supports the hypothesis. In addition, Table 7.3 shows that more discussion with other teachers does not predict satisfaction for teamed teachers (as it did not in the previous Meyer and Cohen study), but it does predict satisfaction for non-teamed teachers.

Sharing materials predicts satisfaction for both teamed and non-teamed teachers, but is stronger for teamed teachers.

TABLE 7.3

Collegial Relationships and Satisfaction with School, by Teaming

Indices of Collegial Relationships	Correlation with Teacher Satisfaction (N=232)	
	Team Member	Non-Team Member
Interaction		
Frequency of talking with other teachers	.08	.15*
Frequency of sharing materials	.35***	.20*
Informal Evaluation by Teachers		
Frequency	.15	.03
Helpfulness	.31***	.14

*p < .05
***p < .001

There is a considerable difference in the importance of collegial relationships to teamed and non-teamed teachers: sharing materials, frequency of teacher evaluations, and helpfulness of teacher evaluations, all were much more important predictors of satisfaction for teamed teachers, as Table 7.4 shows.

The difference in the betas and the considerable difference in the amount of variance explained suggest that once teaming is introduced, collegial relationships in general are much more important for teacher satisfaction.[2]

[2]Further analysis testing for interaction effects between teaming and the indices of collegial relationships revealed a significant interaction effect only between teaming and sharing materials.

TABLE 7.4

Regression of Satisfaction on Collegial Relations, by Teaming

Indices of Collegial Relationships	Team Members		Non-Team Members	
	Beta	Total r^2	Beta	Total r^2
Frequency of sharing materials	.28**		.11	
Frequency of teacher evaluation	.19*		-.14	
Helpfulness of teacher evaluation	.16†		.08	
Frequency of teacher discussion	-.02		.12	
		.17		.06

†p < .10
*p < .05
**p < .01

In Table 7.5, the indices of vertical integration do not show dramatic changes when teaming is introduced as a measure of interdependence. Principal support remains an important predictor of satisfaction, regardless of teaming, and the frequency of principal evaluation and observation maintains its positive relation to satisfaction, regardless of teaming. Only in the area of school policies is there evidence supporting the hypothesis: the existence of school policies is more important to the satisfaction of teamed teachers than of non-teamed teachers, especially in the areas of discipline and student evaluation.

A multiple regression, using all these variables, sheds some further light on the analysis (see Table 7.6). Once principal supportiveness is taken into account, frequency of principal evaluation remains important only for teamed teachers (beta = .33, $p < .01$); for

TABLE 7.5

Vertical Integration and Teacher Satisfaction with School, by Teaming

Indices of Vertical Integration (Principal-Teacher Relationship)	Correlation with Teacher Satisfaction (N=232)	
	Team Member	Non-Team Member
Impersonal Control		
School policies (composite score)[a]	.20*	-.05
Discipline	.29**	.09
Evaluation of students	.18*	-.07
Curriculum	-.02	-.07
Personal Supervision		
Frequency of principal observation	.20*	.19*
Frequency of principal evaluation	.26***	.26***
Principal Support		
Principal support (composite score)	.54***	.42***
Teaching ideas	.37***	.40***
Discipline back-up	.42***	.40***
Special projects	.46***	.29***
Parent relations	.46***	.34***

*p < .05
**p < .01
***p < .001

[a]Composite scores were obtained by averaging the normalized component scores.

non-teamed teachers it becomes insignificant (beta = .01). This suggests that beyond a supportive principal role, teamed teachers also value some form of personal supervision. School policies also show much stronger effects on satisfaction for teamed teachers: positive in the case of student evaluation policies (beta = .27, $p < .01$) and

TABLE 7.6

Regression of Satisfaction on Indices of Vertical Integration, by Teaming

Indices of Vertical Integration	Team Members		Non-Team Members	
	Beta	Total r^2	Beta	Total r^2
Frequency of Principal Evaluation	.33**		.01	
Frequency of Principal Observation	-.09		.04	
School Policies				
Discipline	.16		-.01	
Evaluation	.27**		-.09	
Curriculum	-.26**		-.08	
Principal Support				
Teaching ideas	-.09		.38**	
Discipline back-up	.09		.29**	
Special projects	.27**		-.11	
Parent relations	.18		.01	
		.41		.27

**p < .01

negative in the case of curriculum policies (beta = -.26, p < .01). The comparable betas for non-teamed teachers are not significant (-.09 and -.08, respectively). Thus, in addition to having a supportive principal, it is apparently also important for teamed teachers to have some general school policies on student evaluation. School policies on curriculum seem to be a source of dissatisfaction to teachers generally, and especially for teamed teachers. Although discipline policies are more important for teamed teachers, the effect is greatly reduced by the strength of the principal support variables, and the betas are not significant.

The total variance explained by the variables under discussion is quite different for teamed teachers (r^2 = .41) and non-teamed teachers (r^2 = .27). When we tested for interaction effects, we found that teaming and school policies, particularly in the area of student

evaluation, showed significant interaction effects in addition to their independent effects. On the whole, the multiple regression results give considerable support to the hypothesis that vertical integration is more important for teamed teachers than for non-teamed teachers.

Interdependence: Effects of Teaming in Open Space

In this analysis we shift to data for team members only (N=102). Virtually all the open space teachers are on teams, so we divided teamed teachers by whether or not they taught in open space areas. Among teams, we assumed that those working in open space were more interdependent than those working in self-contained classrooms.

Informal teacher evaluation indices show the same relationship to teacher satisfaction for teams in the two settings, contrary to our prediction of a strengthened relationship between teacher evaluation and satisfaction where teams are more interdependent. The frequency of teacher evaluation and satisfaction are correlated .18 in open space and .12 in conventional classrooms. Neither correlation is statistically significant. The correlation between the helpfulness of teacher evaluation and satisfaction is equally strong, and statistically significant, in both physical settings (.31 and .30).

The original proposition that vertical integration becomes more important to teachers when interdependence is increased is supported by the data on open space (see Table 7.7). This expected relationship is further supported by a different line of evidence. Since previous research had shown the importance of visibility for the perceived legitimacy of formal evaluation systems, we had strong theoretical grounds for expecting evaluation by the principal to be more strongly related to teacher satisfaction for open space teams. Table 7.7 bears out this prediction. In addition, Table 7.7 shows the extraordinary importance of a school policy on discipline for satisfaction in open space. Also indicative of the importance of discipline in open space is the correlation of principal support for discipline with satisfaction in open space (r = .52). The increased interdependence of open

space appears to make several of the indices of vertical integration more important for satisfaction.

TABLE 7.7

Correlation of Vertical Integration and Satisfaction of Teamed Teachers, by Setting

Indices of Vertical Integration (Principal-Teacher Relationship)	Open Space Team (N=52)	Non-Open-Space Team (N=50)
Impersonal Control		
School policies (composite score)	.23	.15
Discipline	.52***	.02
Evaluation of students	07	.27**
Curriculum	-.13	.08
Personal Supervision		
Frequency of principal observation	.31**	.03
Frequency of principal evaluation	.48***	.01
Principal Support		
Principal support (composite score)	.58***	.51***
Teaching ideas	.44***	.30*
Discipline back-up	.59***	.25*
Special projects	.34**	.58**
Parent relations	.56***	.34**

*p < .05
**p < .01
***p < .001

A multiple regression analysis, using the same indices of vertical integration, permits us to take a closer look at just which variables are important in the two settings. The importance of discipline for open space teams is confirmed, particularly with respect to school policies on discipline (beta = .31, $p < .01$, for open space teamed teachers; beta = -.36, $p < .01$, for teamed teachers in self-contained

classrooms.[3] Frequency of principal evaluation and principal support in parent relations are also important as predictors of satisfaction in open space. The indices of support more directly related to the teaching task (teaching ideas and special projects) show stronger effects in conventional settings. This is also true of school policies on student evaluation. On the whole, the analysis suggests that management-related and control-related variables are more important for teams in open space, while variables related to instructional practices are more important for teams not in open space.

Interdependence: Types of Teaming

One solution to the problems of high interdependence in teams, especially in teams in open space schools, might be to cut back on that interdependence through cross-grouping. By dividing up the children according to decisions made early in the year, the need for further decision making and coordination would be reduced. We do find that reports of cross-grouping are somewhat more common in open space schools than among teams in self-contained schools. (It is not true, however, that joint teaching is significantly less common in open space schools.) We find a correlation of .42 between cross-grouping and satisfaction among teams working in open space settings; thus, it appears to be a satisfactory arrangement to open space teachers. Team members who frequently engage in joint teaching are more interdependent. Such teams also tend to engage in less routine instructional practice, as was shown in Chapter 4.

Unfortunately, we do not have enough schools to control open space and cross-grouping or open space and joint teaching simultaneously. Therefore, in the next two tables we disregard open space and simply look at teams high and low on cross-grouping and joint teaching. In Table 7.8, we examine the relationships between teacher evaluation and satisfaction in the two types of teams. For teams whose members often

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[3]There was also a strong interaction effect of open space and policies on discipline.

TABLE 7.8

Correlation of Informal Teacher Evaluation and Satisfaction among Teamed Teachers, by Cross-grouping and Joint Teaching

Measures of Teacher (Collegial) Evaluation	Cross-grouping		Joint Teaching	
	High (N=50)	Low (N=46)	High (N=46)	Low (N=46)
Frequency	-.06	.20	.25*	.09
Helpfulness	.25*	.30	.22	.48***

*p < .05
***p < .001

teach jointly, the frequency of collegial evaluation is positively related to teacher satisfaction; while for teams high on cross-grouping the opposite, though weaker, pattern holds. Team teachers who report frequent joint teaching and frequent evaluation by other teachers are more satisfied than teachers working in the same way who do not frequently evaluate each other. Thus the informal system of teacher evaluation appears to function as a satisfactory method of lateral integration only under some very special working arrangements. The helpfulness of teacher evaluation does not become any more powerful as a predictor of satisfaction under these conditions and in fact seems to be more important when joint teaching is infrequent.

Table 7.9 presents some of the most interesting results of this analysis. It shows marked increases in the relationship between vertical integration and satisfaction for teams reporting frequent joint teaching. Correlations between teacher satisfaction and school policies (composite score: r = .32), frequency of principal evaluation (r = .42), and principal support (composite score: r = .70) are all considerably higher for team members high on joint teaching than they are for team members low on joint teaching. On the other hand, when

cross-grouping is used as an index of interdependence the relationship of vertical integration to satisfaction is considerably stronger for teachers who do less cross-grouping.

TABLE 7.9

Correlation of Vertical Integration and Satisfaction among Teamed Teachers, by Cross-grouping and Joint Teaching

Indices of Vertical Integration (Principal-Teacher Relationship)	Cross-grouping		Joint Teaching	
	High (N=50)	Low (N=46)	High (N=46)	Low (N=46)
Impersonal Control				
School policies (composite score)	-.11	.21*	.32*	.11
Discipline	.05	.47***	.46***	.27*
Evaluation of students	.05	.22	.15	.19
Curriculum	-.27*	.01	.05	-.15
Personal Supervision				
Frequency of principal evaluation	.20	.23	.42***	.22
Helpfulness of principal evaluation	.45***	.38**	.58***	.42**
Principal Support (composite score)	.42***	.57***	.70***	.38**
Teaching ideas	.22	.49***	.50***	.37**
Discipline back-up	.32**	.40***	.56***	.29*
Special projects	.38**	.56***	.65***	.27*
Parent relations	.28*	.42**	.62***	.26*

*p < .05
**p < .01
***p < .001

Socioeconomic Status of Schools

The 16 schools were dichotomized into high and low SES, depending on the rank order of the school mean of individual teacher SES ratings

of students. Thus there are eight high-SES schools and eight low-SES schools. There are several organizational differences between these sets of schools. First, teaming is much more common in high-SES schools: 64 percent of the teachers in high-SES schools are teamed, compared to 24 percent of the teachers in low-SES schools.[4] Second, teaming and satisfaction are related somewhat positively in high-SES schools (Tau = .12) and negatively in low-SES schools (Tau = -.11). Third, the proportion of teachers reporting high levels of collegial relations tended to be higher in high-SES schools, as Table 7.10 shows.

TABLE 7.10

Percentage of Teachers Reporting High Values on Indices of Collegial Relations, by School SES

Indices of Collegial Relations	School SES		Significance of Kendall's Tau
	High (N=111)	Low (N=121)	
Frequency of teacher evaluation	36%	26%	$p < .01$
Helpfulness of teacher evaluation	39	24	$p < .001$
Frequency of teacher observation	33	22	$p < .01$
Sharing of materials	40	26	$p < .001$

Table 7.11 shows that teachers in high-SES schools also reported higher levels of vertical integration on a number of indices. The higher level of reported discipline policies and of principal support for discipline in high-SES schools seems particularly surprising in view of the usual concern over student discipline in low-SES schools.

[4]This SES difference in teaming is not accounted for by the over-representation of open space in high-SES schools: in both high and low SES schools about half of the teams were in open space settings.

TABLE 7.11

Percentage of Teachers Reporting High Values on Indices of Vertical Integration, by School SES

Indices of Vertical Integration	School SES		Significance of Kendall's Tau
	High (N=111)	Low (N=121)	
Frequency of principal evaluation	34%	35%	N.S.
Frequency of principal observation	26	32	$p < .05$
School policies, discipline	61	43	$p < .001$
School policies, curriculum	33	40	$p < .05$
Principal support			
Teaching ideas	62	37	$p < .001$
Discipline	41	30	$p < .01$
Special projects	44	36	$p < .01$
Parent relations	41	33	$p < .05$

Since we have already shown that teaming changes the way in which organizational conditions relate to satisfaction, and since teaming and school SES are positively associated, we will move directly to an analysis of collegial relations and satisfaction in the two SES settings, holding teaming constant. Table 7.12 shows the correlations between teacher satisfaction and some indices of collegial relations in the two social class settings. It reveals that among teamed teachers in low-SES schools more intense collegial relationships are associated with less satisfaction. The opposite is the case for high-SES schools. Despite the small number of teachers on teams in low-SES schools in this sample, the results indicate that teams in this setting are experiencing some special difficulties.

TABLE 7.12

Correlation of Collegial Relationships and Teacher Satisfaction for Teamed Teachers, by School SES

Indices of Collegial Relations	r	
	High SES (N=70)	Low SES (N=29)
Interaction		
Frequency of sharing materials	.43***	.25
Interdependence		
Frequency of team meetings	.31**	.01
Frequency of joint activities	.28**	-.35*
Teacher Evaluation		
Frequency of teacher observation	.29**	-.32*

*p < .05
**p < .01
***p < .001

Discussion

Our data contain ample evidence of positive associations between closer teacher relations and teacher satisfaction; there is even more consistent evidence of the relation between vertical integration and teacher satisfaction. Even our initial zero-order correlations show significant results. However, these zero-order correlations must be interpreted with caution. When interdependence of teachers is introduced as a control, the pattern of association changes, and the change varies according to the index of interdependence used. In general, it appears to be the case that interdependence makes both collegial relationships and vertical integration more important for teacher satisfaction, and the stricter the criterion of interdependence, the stronger this result appears.

If the measure of interdependence is simply teaming, we find that several aspects of collegial relations are more important for the satisfaction of teamed teachers than for non-teamed teachers: sharing materials, helpfulness of teacher evaluation, and frequency of teacher evaluation (Tables 7.3 and 7.4).[5] The relatively weak effect of frequency of teacher evaluation on satisfaction suggests that only under special conditions does informal teacher evaluation become a source of satisfaction, even on teams. This interpretation is supported by the finding of a significant correlation between frequency of teacher evaluation and teacher satisfaction for teamed teachers who often teach jointly (Table 7.8). Thus, as the index of interdependence becomes more rigorous, more frequent collegial evaluation is more likely to become a source of satisfaction for teamed teachers.

Indices of vertical integration become even more markedly important to satisfaction when interdependence increases. When teaming alone is taken as the measure of interdependence, school policies on discipline and on student evaluation are more important to the satisfaction of teamed teachers (Table 7.5). In the multiple regression analysis, frequency of principal evaluation also remains more important to the satisfaction of teamed teachers than to that of non-teamed teachers once the principal support indices are taken into account (Table 7.6). When the level of interdependence is higher, as when we compare teams working in open space to teams in self-contained classrooms or when we compare team members who often teach jointly with those who do not (Tables 7.8 and 7.10), we find the relationships highly intensified in a number of areas, particularly discipline policies and frequency of principal evaluation. The importance of the principal's evaluation for teacher satisfaction in open space had been expected from studies of the effects of visibility which showed that visibility increases the perceived legitimacy of the evaluation system (Marram, 1971). Our results

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[5]Although the direct correlation between frequency of teacher evaluation and satisfaction is not significant for teamed teachers, multiple regression shows that frequency of evaluation has a direct effect on satisfaction as well as an indirect effect through greater perceived helpfulness.

suggest that because the principal can and does observe a much wider sampling of the team's activities under conditions of open space, the principal's evaluations can become a more valued source of support for teachers.

Our analysis of teams in open space suggests that they do not always represent the most "advanced" examples of work arrangements or teaching methods. They are much more likely to use cross-grouping than teams in self-contained classrooms; moreover, cross-grouping by open space team members is strongly associated with teacher satisfaction with school. However, it does not seem to be an indicator of a well-functioning team: the relation between satisfaction with team (rather than overall school satisfaction) and cross-grouping is negative for open space team teachers. Moreover, cross-grouping tends to be related to relatively routine technology, as discussed in Chapter 4. It may be that the increased interdependence of open space teams generates special problems; cross-grouping may represent a satisfactory solution to these problems by reducing the need for communication and coordination. The importance attached to student discipline policies for satisfaction of teachers on open space teams may also indicate a desire to reduce the possible intrusiveness of other classes on one's work space due to the high interdependence in this setting.

In general, the picture emerging from this analysis can be summed up in two brief statements:

1. Interdependence increases the importance of both collegial relationships and of vertical integration for teacher satisfaction.

2. As the criterion for interdependence becomes more rigorous, the importance of vertical integration for teacher satisfaction increases.

Effects of School SES

When the socioeconomic status of the school is taken into account in addition to interdependence, the results are quite provocative. Given teaming, as interdependence increases, so does teacher

satisfaction--but only for high-SES schools. In the low-SES schools there is some evidence of a negative relationship between increased interdependence of teamed teachers and teacher satisfaction. Far from representing a conclusive result, with only eight schools in each SES category, this finding suggests the need for a closer examination of teaming in low-SES schools. It may be that in this setting there is much less confidence in the efficacy of teaching. Teachers may be discouraged because the children do not learn very rapidly, no matter what technique they use. When one is not seeing satisfying results, the time and trouble of joint teaching may not seem worthwhile.

Implications for the Principal's Role

Let us examine the results from the point of view of what principals might do to improve teachers' satisfaction. Most important is the warning to use caution in interpreting a result such as the observed association between individual reports of principal evaluation and teacher satisfaction. This result should not be interpreted to mean that principals who evaluate every teacher in the school regularly have the highest staff morale. The observed association is based on individual data, and it can be taken to mean that some teachers on a staff have a satisfying relationship with the principal from whom they receive frequent evaluation. Other teachers on that same staff may report infrequent evaluation. We found that in some schools teachers gave widely varying reports of the frequency of the principal's evaluation. Although there was a significant correlation between teachers' reports on the frequency of principal evaluation and teacher satisfaction for the sample of individual teachers, when we look at the correlation between the teachers' mean response in each school on frequency of principal evaluation and satisfaction the correlation is insignificant.[6]

The finding that principal evaluation in open space is an important predictor of teacher satisfaction gives an important clue. Probably,

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[6]In fact, in the two schools where teachers rather uniformly reported a high frequency of evaluation, staff morale was relatively low when we calculated a mean level of teacher satisfaction.

the principal's evaluation becomes a source of general high morale when the teachers feel that the evaluations are legitimate and helpful. Perceptions of legitimacy are more likely to occur when the principal can see a fair sampling of teacher performance, as in open space schools.[7]

The strength of the association between individual teachers' reports of principal evaluation and teacher satisfaction may even come about because teachers who like the principal often seek him or her out for evaluation and remain in close contact. Those who are not satisfied with the school and do not like the principal may successfully avoid frequent evaluation. As one of the principals in our sample reported, a teacher in his school, upon finding the principal outside the classroom door, opens it a crack and says, "May I help you?"[8]

An important general finding with implications for the principal's role is the strength of the relationship between teacher satisfaction and the perception that the principal supports teachers' ideas, discipline, relations with parents, and special projects. Support from the principal generally remains a strong positive predictor of teacher satisfaction, regardless of teaming, open space, or school SES. This support becomes even more important when team members engage in joint teaching. Attempting to provide support for teachers in these areas appears to be a constructive goal for principals.

There are some interesting suggestions for the principal's role with respect to general school policies in schools that have teaming. For team members, policies on student evaluation and student discipline

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[7]It should not be inferred from this result that the evaluations of principals in open space are more likely to be perceived as sound. They are not ($r = .01$).

[8]Our assertion that the relationship between frequency of principal evaluation and teacher satisfaction has different meanings in traditionally organized schools and in teamed schools is supported by the multiple regression analysis. In non-teamed schools, once principal's support variables are entered, frequency of principal evaluation is no longer a predictor of teacher satisfaction. In contrast, in teamed schools frequency of principal evaluation retains its power to predict teacher satisfaction after the supportiveness is taken into account.

appear to have special importance in predicting teacher satisfaction. In open space, a general policy on student discipline has an especially strong relationship to teacher satisfaction. These results suggest that principals should give particular emphasis to developing such policies when there are teacher teams, especially in open space schools.

Our final suggestion for the principal working in open space schools is that if he or she wishes to introduce a technology such as flexible grouping, it may first be necessary to improve the communication and interaction among team members so that they will be willing and able to handle the possible frustrations of a task requiring increased interdependence. Many open space teams seem to adopt and be satisfied with cross-grouping; yet this often does not represent very sophisticated instructional practice and is not related to satisfaction with teaming.

If open space teams are moving to cross-grouping because high interdependence is especially frustrating in the open space setting, then the principal may have to look for ways to provide more support for teams in this setting. If teams do develop to the point that they are willing to increase their frequency of joint teaching, the role of the principal appears to be more important than ever as a source of evaluation, an administrator of general policies, and, above all, a supporter of the teacher's role.

In conclusion, this investigation into support for the teacher's role through collegial relationships and vertical integration has been able to suggest ways in which the general proposition that organizational changes may increase teacher satisfaction are conditional upon the level of staff interdependence. Although we did not develop the questionnaire specifically to study the integration of the school organization in its relationship to the role of the teacher, we have been able to draw a more complex and sophisticated picture of the working conditions of teaching than have any of the Environment for Teaching studies up to this time.

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CHAPTER 8

STUDENT JOB SATISFACTION

Introduction

Throughout the preceding chapters we have been interested in the organizational structures of classrooms, schools, and school districts, and in the impact of these structures on instruction and on the work and orientation of some of the participants. We have not emphasized the effects of organizational patterns on "student outcomes"--the primary goals of the system--because several substantial research traditions deal with these variables. In this chapter, however, we discuss several aspects of the impact of the school on the pupils, whose learning, socialization, and adjustment are of particular concern to practitioners who are responsible for operating schools.

Most research on student outcomes treats students as objects or clients of the school, considering whether the school is able to alter them according to its aims. Researchers examine whether schools increase the knowledge and aptitudes of the child; whether they affect the child's goals, aspirations, and self-concept; and sometimes whether they have long-run effects on the child's values or social skills and attitudes. We have, ourselves, inquired into the relationship between classroom organization and the formation of students' perceptions of their academic ability (Simpson, 1975).

For the most part, the starting point for research on student outcomes is the conception of the school as an organization working its purposes with greater or lesser effectiveness on student targets. This conception has been modified as the research tradition has developed, because it has become clear that students may be affected in ways broader than those defined by the organization's purposes and techniques

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This chapter was written by John W. Meyer, Susan Hurevitz Robbins, and Carl Simpson.

--by their personal relationships with peers and teachers, for example, and by their overall experience in the school as a community.

But it is possible to shift completely away from the conception of students as clients of the school, even though this is an interesting, legitimate, and successful orientation, and to conceive of them as members of the school organization who participate quite actively in its life and whose daily work occurs under its jurisdiction. This perspective is simply a matter of choice, though it may provide some advantages in thinking about the school as an organization. The conception of students as members of the school may become more common in the future; in our society interest seems to be shifting from the future benefits children may derive from childhood and school to a consideration of the satisfactions and well-being of the children in the present. Teachers and administrators are even now highly sensitive to students' affective responses to the school and the classroom.

Once we decide to consider students as members of the school organization rather than as clients, further choices must be made. We might, for example, consider students as part of the school community, whose members share interpersonal relationships, a sense of solidarity, and broad satisfactions and dissatisfactions. We have chosen, however, to look at students as doing jobs in a work organization, focusing on their work at assigned tasks in this organization. This choice, unlike the decision to consider students as members rather than as clients, is not simply a free intellectual choice. In taking this perspective we may be right or we may be very wrong. If neither the children nor those who work with them organize their lives in the school as if it were a task-oriented work organization, but instead relate to each other as members of a broad community, our data may show that our decision to focus on students as workers was a mistake. (Or perhaps teachers and students share an understanding that the school is indeed a work organization, but that the students are merely clients of the teachers, who do the work--in which case we are still wrong.) Nevertheless, we argue that students approach the school as workers with

jobs to do (though without thinking of it in that way), that they are oriented toward doing these jobs, and that they derive their satisfactions from their performance of these work activities (rather than, for instance, from their broader social relations within the school as a community). We will examine our data below to see how much sense this overall hypothesis makes.

If students have "work" roles in the school, we are, of course, interested in the way the classroom, school, and district organizations affect these roles. As with any study of the relation of workers to their jobs, many dimensions could be picked out for analysis. We selected three that are analogous to dimensions commonly studied in the sociology of work roles: whether students like their jobs; how well they think they perform them; and how much autonomy they have in their job performances. We then asked the following questions about these dimensions.

(1) What factors affect student job satisfaction--i.e., the degree to which pupils "like" school? We were especially interested in any evidence on whether structurally complex classrooms and complex instructional arrangements in one way or another expand the roles and the satisfactions of students; but we report also the effects of other factors often discussed in the literature on job satisfaction (e.g. in Tannenbaum, 1966).

(2) What factors affect student autonomy in classroom work, and, in turn, what effects does autonomy have on other aspects of the classroom? Again we were especially interested in whether classroom complexity offered more alternatives to students; we hypothesized such effects on both teachers and students. The analyses below suggest that this variable has different meanings for students than we imagined. In addition, our analyses suggest that student autonomy is much more complicated than we had assumed. With more sophisticated conceptualization and measurement of student autonomy, we would expect to see very different results. Some of our measures in this regard, therefore, are not very useful.

(3) What factors affect students' conceptions of their academic ability? This question, which concerns an intervening variable very commonly evoked by educational theories, was of great interest. It is examined in a separate monograph (Simpson, 1975). Simpson's study shows that students' self-perceived ability tends to derive directly from classroom experience and peer evaluations, and indirectly (through these variables) from teachers' evaluations and test scores. It is further shown, as we would have expected, that complex classrooms tend to break up the simple "ability" stratification of the class, and thus reduce the inequality among students in self-perceived ability.

Who Likes School?

We report below on the factors that affected the extent to which the children said they liked school. As stressed earlier, we conceive of this as essentially a job satisfaction study--students are members, as well as clients, of the school organization, and may find their role in it more or less satisfactory. Their satisfaction, like that of all workers, may be independent of the kind and amount of work they produce, which in this case is the main goal of the organization. We are especially interested in any effects of school or classroom organization on satisfaction, but consider a wide range of hypotheses, as is necessary in all job satisfaction studies. And, as is usually the case with such studies, we are investigating the meaning to the children of their role and their satisfaction with it as much as we are the factors that cause their satisfaction. We suspect that a child might be quite unhappy in the wider world of the school and yet report that he "likes school"--meaning his own particular work role in the organization. And the reverse seems equally plausible.

The basic dependent variable is the response to the question, "How much do you like school?" Despite a healthy myth which indicates otherwise, most children said they liked school. Almost all the children answered the question. Half said they liked school "a lot," and the rest of the answers were spread out among four other answer

categories. Fifteen percent expressed dislike for school. It should be noted that these answers are not strikingly different from those reported by teachers about their own satisfaction (see Chapter 7).

We discovered some initial evidence supporting the view that children approach school in terms of its work, rather than in broader ways, by looking at the relationships between answers to the "liking school" question and answers to questions about liking specific activities. Liking school was closely and positively correlated with liking the main academic subjects: reading ($r = .29$), math (.38), and social studies (.40). And in multiple regression analysis, each of these three items independently contributed a good deal to the explanation of the meaning of the "liking school" question.[1] In contrast, liking athletics ($r = .11$) and liking drawing ($r = .10$) were much less closely related to liking school. However important and satisfying these activities may be to children as people, they are not central to the work of the school. And children apparently perceive this and choose to focus their orientation on the satisfactions to be derived from the main topics of work.

As one might expect, several background factors affected whether or not the children reported liking school, but none of them have large effects, and consequently they are not included in our later analyses. Boys liked school less than girls (beta = .12, $p < .05$). Also, students with lower socioeconomic backgrounds liked school less well than others (.16, $p < .05$). These findings are pretty much what might be expected on the basis of the literature on the subject, but it should again be noted that none of the relationships are large.

What about the satisfaction of minority students? Black (beta = .08, $p < .05$) and Chicano students (.12, $p < .05$) liked school even better than others. Although this finding is contrary to many popularly held beliefs, similar results have been duplicated in a few recent

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[1]Standardized regression slopes (or betas): reading (.24), math (.30), and social studies (.32). In this analysis, for reasons to be made clear below, self-perceived ability and self-esteem were included.

studies which show relatively high academic self-esteem and high involvement and faith in school on the part of Black and Chicano students (Fernandez, Massey, and Dornbusch, 1975). One interpretation is that minority students place much more importance on school and the work they do in school for their success than do other students. Another involves the revolution in the special consideration and positive treatment of minority students.

Methods

We studied 334 third-grade students from 17 classrooms in six schools. The schools were selected from among 16 chosen for our intensive work with teachers to provide a good deal of variation in organization and curriculum. The classrooms in each which contained third-grade students were the focus of the study. Of the 17 classrooms, five were multigraded (with from five to twelve third graders), and one was a combined or teamed class with a total of 50 students. The other classes had from 25 to 33 students.

Since the schools selected were part of our larger surveys, we had district and school data of the sort discussed earlier in this report, and we also had the detailed descriptions of classroom organization and curriculum from the teachers. Further, for this study, the teachers involved were asked to rate each student's performance in three subject areas; to describe each student's membership in ability groups, if present; and to estimate the extent to which they tended to provide feedback of various kinds to the students. School records provided information on the standardized reading test scores the third graders had received as first graders.

A questionnaire was prepared for the students. It was pretested extensively and was very short. In order to make sure the students understood the questions, the test administrator went through the entire questionnaire with the students, leaving time for them to answer each question after it was read aloud. The students reported how they perceived their own abilities in various subjects and their beliefs about

the abilities of their peers. They also reported how much they liked the several academic subjects as well as school as a whole. They described the amount of choice they had in their academic work and responded to a series of self-esteem items.

In addition, five of the third-grade classrooms were observed and described on a systematic observation form. In these classrooms, we observed one period each of math, reading, and social studies instruction. Grouping practices, varieties of available materials, the uses of these materials, the degree to which the children could choose what to do, and the degree of student and teacher physical movement were observed and recorded. Three separate observations were made during each observed period; thus, each classroom was observed at least nine times during our visit.

Hypotheses on Student Job Satisfaction

Liking school seemed to mean liking the work of school. We thus turned to the job satisfaction research tradition for some plausible ideas about the factors involved. (This literature is reviewed by Tannenbaum, 1966, and by the authors of a number of papers in Scott and Cummings, 1973.) In this way, we arrived at six lines of explanation, or six hypotheses.

Ability and rewards. People tend to be more satisfied with work they and others believe they can do well. One might organize a separate argument about rewards, but in the school situation, the student is rewarded in the currency of grades and approval, which are themselves evaluations of the student's performance. Thus, translating this hypothesis into the school situation, we can make a distinction between the student's satisfaction with his own feelings that he is good at his work and the rewards he derives from others who believe he is good at his work. This produces two specific hypotheses:

1a. A student's own conception of his ability to do schoolwork contributes to his satisfaction or dissatisfaction with school.

1b. The assessments by others of a student's work contribute to his satisfaction or dissatisfaction with school.

Self-concept. Over and above a person's specific assessment of his ability to do certain work, he makes general assessments of his adequacy. Higher self-esteem is usually thought to make a person abler to perform roles and more satisfied with the roles and his performance in them. One could imagine that a student who thought of himself as having generally valued abilities for the academic task at hand might be more satisfied.

2a. A student's general self-concept contributes to his satisfaction or dissatisfaction with school.

2b. A student's general conception of his intelligence contributes to his satisfaction or dissatisfaction with school.

Social success. Broader, more affective aspects of a worker's role may affect his satisfaction more than the specific task activities do. Perhaps friendships and the ability to participate effectively in socially desirable activities contribute to school satisfaction. The school day, even more than the ordinary workday, allows for a great deal of socializing. There is recess, lunchtime, physical education, art classes, and after-school interaction.

3. A student's social success contributes to his satisfaction with school.

Autonomy. An issue that flows through the literature on teacher satisfaction (and the literature on job satisfaction in general) is work autonomy. Discretion in choosing and scheduling activities is thought to be an important source of work satisfaction.

4. The degree of work autonomy a student is allowed affects his satisfaction with school.

Classroom complexity. An argument running throughout this report relates the complexity of the classroom situation to the effective integration of the child into the classroom work situation. Complex classrooms offer the teacher and the student more ways to fit the latter

effectively into the work situation. These expanded possibilities should increase the work satisfaction of the student--partly through the variables discussed above, and partly independently of them.

5. More organizationally complex classrooms increase the satisfaction of the students.

Vertical integration. Effective involvement in schoolwork ordinarily seems to require an effective working relationship between student and teacher. In any classroom--perhaps especially in a complex one--higher levels of work-related contact (that is, more frequent and individualized interaction) between teacher and student are crucial to the student's involvement and satisfaction, and may, in addition, increase the rewards the situation offers.

6. Higher levels of contact with teachers increases students' satisfaction with school.

Measures of Perceived Ability and Self-Esteem

Throughout our analyses, two variables seem to importantly affect liking for school: the child's conception of his ability to do the work, and his general self-esteem.

We measured the student's perceived ability by adding together five items: (1) Compared to the other kids in this class, how good are you at schoolwork? (2) Compared to all third graders, how good are you at schoolwork? (3) Compared to all third graders, how good are you at arithmetic? (4) Compared to all third graders, how good are you at reading? (5) Compared to all third graders, how good are you at social studies?

To items 1 and 2 the student could answer: (1) I'm one of the best, (2) I'm better than most, (3) I'm about in the middle, (4) I'm not as good as most, (5) I'm one of the worst. To items 3, 4, and 5, he could answer: (1) I'm a lot better, (2) I'm a little better, (3) I'm about in the middle, (4) I'm a little worse, or (5) I'm a lot worse. The most positive response was scored as 5, the most negative as 1. A mean score on all the items was computed (for item intercorrelations, see Simpson, 1975).

Self-esteem was measured by combining seven items in which the child was asked to rate himself on whether he was more hardworking or lazy, happy or sad, kind or mean, unsuccessful or successful, a leader or a follower, hard to get along with or easy to get along with. There were five possible answers, ranging, for example, from very lazy to very hardworking. The most positive response was scored as 5, the most negative as 1. A mean score on the items was computed.

Results

Factors Affecting Liking for School

Table 8.1 shows the effects of self-esteem and perceived ability on "liking school." Both variables have significant effects. Perceived ability and self-esteem are positively correlated (.40), but have independent effects. It could, of course, be that the findings of Table 8.1 reflect a general halo effect; a child who rates himself high on some other variables may also rate himself high on liking school. Some of our results below cast doubt on this idea. It seems more likely that Hypotheses 1a and 2a are supported.

TABLE 8.1

Regression Effects of Perceived Ability and Self-Esteem on Liking School (N=292)

Variable	Standardized regression coefficient (beta)	F-ratio
Perceived Ability	.21	12.05**
Self-Esteem	.24	16.15**

**p < .01

But let us consider Hypothesis 1b. Other people's ratings of the child's ability, over and above his own, might reasonably be expected to affect the rewards he receives, and hence his satisfaction with school. That is, the evaluation of his work by others should work independently to some extent. In fact, however, it does not. Of course, these ratings might partly be "captured" by the child's rating of himself, and thus when others' ratings are added to the analysis in Table 8.1 no results are added. The results from each indicator are as follows:

a. The teachers were asked to rate each child's overall performance in math and reading. When this variable was included in the analysis of Table 8.1, an utterly insignificant beta weight of .03 resulted. Teacher rating did not correlate with self-esteem (.06), but did with perceived ability (.36).

b. Each child was asked to list the best and worst students in his class in math and social studies. A peer rating index was created by counting the number of times each child was chosen as best in math. This was divided by the total number of good choices. From this number was subtracted the number of times each child was chosen as worst in math divided by the total number of good choices. The same procedure was followed for social studies. The final index was obtained by adding the resulting figures for math and social studies together. A high positive number therefore would indicate that a student was often thought of by his peers as best in math and social studies. A high negative number would indicate that a student was often thought of by his peers as worst in math and social studies. Any number approaching zero would be about average. When added to Table 8.1, this variable showed an insignificant effect of -.05 on liking school. The peer rating measure correlated only slightly with self-esteem (.15) and more strongly with perceived ability (.39).

c. The first-grade reading test score of each child is recorded in the school office. It might be thought to affect in subtle ways how the teacher and others treat the child. When added to Table 8.1, it shows an effect of .00, which is naturally insignificant. This measure did not correlate significantly with self-esteem (-.02) or with perceived ability (.06).

d. In many of the classrooms, some sort of ability grouping is in effect. The teachers were asked which math and reading ability group each student was in. These reports were combined into an index, which was then entered into the analysis of Table 8.1. It showed an insignificant effect of -.01 (3 = fast

group, 2 = medium group, 1 = slow group). The correlation between this index and self-esteem was -.05; that between the index and perceived ability was .20.

Hypothesis 1b is eliminated by the data. This is not to say that teacher and peer ratings are unimportant to the child. Simpson's (1975) analysis of these data shows that these variables have substantial effects on the child's conception of his own ability. Our point here is that they apparently do not indicate a set of rewards that affect the student's satisfaction directly; they operate only through their effects on his own perception of his ability. Over and above this, having his ability respected by others may please the child, but it apparently does not make him say he likes school more.

Hypotheses 2b and 3 fare no better. Hypothesis 2b argued that beyond high self-esteem, high and generalized academic self-esteem would produce satisfaction with school. Along with the other self-esteem items the children were asked to rate themselves on how "smart" they were. These ratings were correlated with the other self-esteem items, but showed by far the lowest individual correlation with liking school. And when included in the regression analysis of Table 8.1, the item showed an almost significant negative effect of -.13 (beta); "smart" correlated with self-esteem .45 and with perceived ability .47. Thinking well of oneself and thinking one is good at schoolwork improves one's satisfaction. Believing one has high capacity in the abstract does not help.

Hypothesis 3 (the social success idea) was tested in two ways. First, the children were asked how good they thought they were at athletic activity. We believed that even among third graders, such success might be valued. When added to Table 8.1, however, the item showed no independent effect (beta = .04). The correlation is .21 with self-esteem and .25 with perceived ability.

Second, more powerful evidence is provided by a sociometric question: The children were asked to name three friends, and the number of nominations received by each child was scored and divided by the total number of choices. Here, the correlation with self-esteem is .07 and

with perceived ability, .20. This variable, when added to Table 8.1, has an insignificant (.06) effect on liking school.

An even more powerful finding which provides evidence against the social success hypothesis is that whether students think they have friends or not does not affect their liking school. When the perceived sociometric choice item was added to the items in Table 8.1, there was no significant effect (beta = .00); perceived friendship was correlated with self-esteem and perceived ability .20 and .16, respectively. The students were asked to "circle the drawing which shows how many kids in this class like you and want to be your friend." The five answer categories ranged from a picture with one face to a picture with fifteen faces. This is very surprising. When students are asked how much they like school, they just are not thinking about how many friends they have or how popular or socially successful they think they are. They are thinking about how competent they are at doing schoolwork and how they think of themselves generally. Hypothesis 3 clearly fails.

These data make very clear what children mean by "liking school." Having friends who rate one highly and thinking oneself socially successful must add to the satisfactions of a child's life considerably, as must being athletically skilled or having one's abilities admired. But this turns out not to be the question the children were answering. The children, much like the adults who answer job satisfaction questions, were literally telling us whether they liked their schoolwork. They liked it more if they felt they were good at it (but not if they thought they were "smart"), and they liked it if they had more general self-respect. The point is, however, that they were telling us about their feelings about their work, not their school life in general.

We turn now to examine the specifically work-related hypotheses: 4, 5, and 6. Hypothesis 4, the idea that work autonomy should affect job satisfaction--an idea with substantial support in adult populations--fails:

a. The children were asked how much they could choose which activities they did, and when they did them. When added to Table 8.1, these variables have completely insignificant

effects (beta = .03 and .04, respectively). Student autonomy/time correlated .14 with self-esteem and .16 with perceived ability. With student autonomy/activity the correlations were .18 and .08.

b. We asked the teachers how much choice they permitted the children. The effect on students' liking for school was completely insignificant (beta = .05). The correlations with self-esteem and perceived ability were near zero.

c. From our direct classroom observation, we categorized the classes by the amount of independent choice the classroom structure (in five classrooms) allowed the child. We have data for only 63 of the children, but an insignificant beta of .06 resulted when this variable was added to Table 8.1. The correlations with self-esteem and perceived ability are -.02 and .11, respectively.

d. Also from our direct observations, we classified the classrooms by the amount of physical movement among the children which could be observed, on the grounds that in a sense this reflects child autonomy (Lueders-Salmon, 1972). An insignificant beta of .06 resulted (based on only 63 cases in five classrooms). The correlations with self-esteem and perceived ability are near zero. (Intercorrelations between the three sources of data on student autonomy--teacher, student, and observation--will be discussed in the autonomy subsection of this chapter.)

We believe our measures of autonomy have many weaknesses, as mentioned previously. Nevertheless, it is astonishing that five different ones fail to show significant effects. This contrasts greatly with most surveys of adults. Apparently our measures were so broad as to include in "autonomy" classroom situations which provided so much uncertainty and lack of structure and guidance that the net effect lacked satisfying qualities. If so, the result is reminiscent of our previous data on teachers (Meyer & Cohen, 1971), which suggested that some types of autonomy for teachers, particularly those in self-contained classrooms, are so isolating as to be dissatisfying. In any event, these data on autonomy seem important and even more striking given that more than a decade of educational innovations in both the United States and Great Britain under such names as free schools, open education, democratic teaching, and informal education have been built on the assumption

that students are happier, more motivated, and more apt to achieve in school if they are given some degree of freedom to learn what they want, when they want, and in their own way, and for their own purposes. Whole schools, both public and private, have dedicated themselves to this assumption. The open space schools have actually committed themselves structurally to this belief.[2] Our results, or rather, our lack of results, suggests that this process of student autonomy is not sufficiently understood. Further research seems necessary in order to begin to identify the specific conditions under which student freedom is indeed both meaningful and satisfying to the student.

We will return to this issue of student autonomy in the next section of this chapter.

The same failure confronts Hypothesis 5--the idea that complex classrooms increase student satisfaction. We had imagined that these more complex settings provided enough features of interest--more materials, more possibilities for work and satisfaction--to show at least some effects. But data from our survey of teachers is convincing:

a. Open space classrooms show no effects on students' satisfaction (beta = -.04).

b. Teamed teachers do not have more satisfied students (-.09).

c. Wider variations in instructional style and materials show insignificant effects in reading (.12) and in math (-.09). (In this case the teachers were asked how often their students engaged in using manipulative and audiovisual materials.)

The teachers were also asked how much variation there was in the materials their students used in each subject. Again there is no effect (beta = .00). As a final, and crushing, test of the relationship of

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[2] G. H. Bantock, a popular critic of the British informal education movement, offers a possible explanation for the origin of these movements. He suggests that this belief in the virtue of student autonomy is really based on philosophical assumptions about the nature of the child, dating back to Rousseau's writings, rather than on any empirical data. Bantock expresses no surprise that so many teachers sympathetic to the idea of student freedom, have failed to implement it "in its true state in the classroom" (Bantock, 1965).

satisfaction and complexity, we conducted a one-way analysis of variance to see if the satisfaction of the 320 students who answered the satisfaction question was significantly affected by which of the 17 classrooms they were in. This was a fairly loose test, since any classroom property (including some we have no measure of, such as teacher competence) could, if it were operating with some force, produce a significant effect. And there are enough cases for a significant result to occur. The analysis of variance showed insignificant classroom differences ($F = .146$, d.f. = 16,313).[3]

We have gone to some trouble to study, in this special investigation, schools that vary to an exceptional degree in structure and curricular organization. And the result is an insignificant difference in student satisfaction with school. The point bears repetition: despite our efforts to violate the principle of random sampling and to find schools that varied sharply in curricular organization, we were unsuccessful in finding systematic between-classroom variance in student satisfaction.

The finding that variations among our classrooms in pupil satisfaction are not significant does not completely eliminate the possibility that a more exact examination of the effect of a particularly strategic classroom characteristic will show a significant result. In fact, below we examine a general classroom property--student-teacher contact--which does seem to have an effect. But an analysis of variance tells us that however statistically significant such a result can be, and however interesting intellectually, it is not likely to account for much of the overall variation in pupil satisfaction with school.

The finding, however, reminds us of a weakness in our data. These data are drawn from very young children, who do not have well-developed frames of reference from which to make comparative judgments. They can

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[3]However, one of the five schools in which we collected these data does tend to receive high satisfaction scores. It is represented by two of our 17 classrooms. Our analysis of variance provides no reason to believe this is not an accident.

report their ability or social success with some accuracy--because they are within the classroom surrounded by more and less able and popular peers. But they have very little between-classroom experience. And if asked whether they like school (or, later, how much autonomy they have in the classroom), they may have difficulty making a comparison. They know little about other schools and had typically only been in two other classrooms before the year in which they were questioned; thus it is perhaps to be expected that comparisons of their answers between classrooms would show few results. How were they to decide whether this classroom was satisfactory or unsatisfactory if they could recall few comparisons, and if they lacked the social maturity to have acquired bases for comparison by talking with others (or by even more indirect means)? Perhaps, in other words, our data are not adequate for the problem we are approaching.

Hypothesis 6 (vertical integration--i.e., communication with the teacher--produces satisfaction) returns our analysis to the individual level, in part. But the measures we use (feedback, grading, teacher physical movement, collective teacher responsibility) are derived from our teacher questionnaire and thus give the same score to all the students in each classroom. And while we already know that no single classroom variable is likely to produce substantial results, it is extremely interesting that our data produce encouraging findings.

(1) Our simplest measure is the teacher's report of how often feedback is provided to the students. (Teachers were asked: "In general, how frequently do you give your students feedback regarding their performance in each subject below?" There were six possible answers: daily, several times a week, about once a week, once or twice a month, once or twice a year, and never.) This measure--a classroom characteristic in our data--showed significant effects on student satisfaction in our regression analyses. When added to the two basic variables in Table 8.1, it produced a beta of .15, and an F-ratio of 6.8, with a significance level of .01 (see Table 8.2). The effects of perceived ability and self-esteem remained significant. Feedback did not significantly correlate with self-esteem (-.11) or perceived ability (.01).

TABLE 8.2

Regression of Effects of Frequency of Feedback and Grading on Liking School (276 cases)

Variable	Standardized regression coefficient (beta)	F-ratio
Frequency of feedback	.15	6.99**
Frequency of grading	.05	.95
Perceived ability	.21	12.03**
Self-esteem	.24	15.4 **

**p < .01

Interestingly, frequency of feedback is essentially uncorrelated (-.04) with the frequency with which the teacher reports grading the child. Grading, in the teacher's definition, has no significant effect on student satisfaction and does not alter the effect of reported feedback (see Table 8.2). This means that the teachers are reporting to us a kind of contact with the child's work that is removed from the standardized evaluation system and unrelated to it. In sum, frequency of feedback significantly contributes to students' liking for school. Frequency of grading does not.

(2) A second indicator of vertical integration derives from our observational data. We scored the extent of teacher physical movement in the classroom. We reported above that pupil physical movement is not related to satisfaction with school. But in our limited observational data (63 cases), teacher physical movement, when added to perceived ability and self-esteem, shows an interesting, though insignificant effect (beta = .22, F = 1.95). Our interpretation is simple: if teachers move about the classroom, it is to maintain contact with the diverse student activities and to provide control and meaning to these activities.

(3) A third indicator has to do with collective responsibility for the progress of the children. We earlier reported that teacher teaming has no effect on the satisfaction of the children. But within teaching teams, when we isolate the property of genuine complexity in relation to the child, we find that within the teaming situation, this variable shows a significant effect ($N = 155$, beta = .20, $F = 7.3$, $p < .01$). The teachers were asked, "Which most accurately characterizes your team?: (a) It is collectively responsible for a common group of students in all subjects, (b) It is collectively responsible for a common group of students in one or more subjects, but not in all subjects, (c) Students are really assigned to individual teachers who are individually responsible for them. The answers were scored as follows: answer 1 = 3; answer 2 = 2; answer 3 = 1.

(4) A fourth indicator is even more indirect. We asked the teachers to rank which way their students were organized most frequently in reading--whole class, two or three groups, four or more groups, or students working individually. (Reading was the most important subject taught in the third grade in terms of time and energy devoted to it.) This variable, in our view, suggests a systematic attention on the part of teachers to the particular performances of the child. Its effect on child satisfaction in school, when added to the basic variables in Table 8.1, is barely significant (beta = .14, $F = 3.02$, $p < .10$). We would emphasize this result even more, especially because of the absence of generalized grouping effects as shown earlier, were it not that the same variable for grouping in mathematics shows an insignificant negative effect (beta = -.11, $F = 1.9$).

Overall, it seems that those aspects of classroom organization which produce direct contact between the teacher and the student may increase student job satisfaction. In this respect, the school differs from a modern technical system, such as a factory, in which satisfaction derives from completely impersonal factors. The child is, perhaps, too dependent on the teacher's definitions of what constitutes adequate work and behavior to formulate his own independent picture of the progress

of his work. It is certainly true that the student is in a dependent situation (as in a familial, or perhaps even a feudal, social system), for in most schools the main educational goals are set by other people, as are the standards of evaluation. If learning is an insufficiently integrated technical activity for the child, he cannot establish his overall position.

Thus, like people everywhere who occupy highly dependent work roles, the child obtains satisfaction from (a) a general knowledge of his moral worth, (b) a sense of ability equal to the tasks at hand, and (c) direct personal contact with the center of authority in his world. This makes a great deal of sense, in view of the picture of schools we have developed elsewhere in this report. The feeling of success or failure is not organizational or broadly interpersonal in character. It derives from the private activities and feelings concerned with individual production, and from the moral authority (the teacher) that decides on the meaning of this individual production.[4]

To sum up the results thus far, we find that pupils' perceived ability, general self-esteem, and teacher contact are related to satisfaction with school. Rewards from others, general academic self-concept, autonomy, general classroom characteristics, and social success have no effects that we can find.

What does this mean? In our view, it means that the students are more simple and direct than either we researchers or the contemporary educational system properly comprehend. They form their own impression of where they stand vis-à-vis the day-to-day requirements of the school system and their authorities (i.e., teachers), and they disregard what the rest of us think of as considerations for manipulation (their diffuse ability, their arbitrary standing, their social success, and their complex classroom circumstances). They see, perhaps because of general

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[4]The only fly in this ointment is, so far as we can see, the fact that the teacher's evaluation (specifically, grading) of the student has no direct effect on student satisfaction.

cultural definitions of the school, what the score is. And in terms of that, they evaluate their status with respect to the school.

The Ambiguities of Student Autonomy

Ordinarily, a certain amount of autonomy in the performance of work contributes to worker satisfaction. The literature on open classrooms has been singing the praises of more autonomy for the student for years, although much of this activity has been based on philosophic rather than empirical argument. We had supposed that complex classrooms would considerably increase the satisfaction of the child, and would do so by generating higher levels of autonomy. In a complex classroom, a given child may work on many more different tasks than in an ordinary classroom because the possibilities are greatly expanded. Which tasks he works on at any given time should be worked out by the child and the teacher, with the child's interests and feelings included as factors. The effect of the complex classroom should be that the child has more effective control over what he does, is better fitted to his tasks, and is more satisfied.

This line of reasoning seems quite plausible--and indeed captures some of the central claims of the current movement toward more complex classrooms. But it fails to be supported by our data. Our three measures were the student account, the teacher account, and an observation measure. None of them--not even either of the two measures taken directly from the students--is related to liking school. This leads us to consider two questions: First, what do the children themselves mean in their answers to our questions about autonomy? And second, why do none of our autonomy measures relate to the children's account of their satisfaction with school?

The Meaning of Autonomy to the Child

The 334 third graders were asked two questions which we interpreted as indicators of autonomy. The results are based on 327 responses.

1. How often do you decide what time to work on different subjects?

I usually decide.	25%
Sometimes I decide, but usually my teacher tells me.	46%
I almost never decide. My teacher tells me.	27%
Missing data	2%

2. How often do you decide what kind of work you will do for school?

I usually decide.	26%
Sometimes I decide, but usually my teacher tells me.	39%
I almost never decide. My teacher tells me.	33%
Missing data	2%

To our surprise, the students' answers to these questions concerning their freedom of choice in school were not correlated with the teachers' answers to similar questions. The 17 teachers were asked:

How often are students in your class free to choose their own activities in each subject area?

Frequency	Math	Reading	Social Studies
Always	7%	0%	7%
Usually	9	9	9
Fairly often	26	37	32
Occasionally	16	54	31
Seldom	35	--	--
Never	--	--	--
Missing data	7	--	--

Table 8.3 shows the correlations between the students' and teachers' answers for math and reading.

The absence of significant relationships is very surprising. The teachers and students are reporting on very similar issues that bear directly on the day-to-day work of the classroom. But there is no agreement. We tend to think that the teachers share something of our own meaning of the term in answering the questions (we later present

TABLE 8.3

Correlations between Students' and Teachers' Reports on Student Work Autonomy, by Subject

Type of Autonomy	r	
	Math	Reading
Time	.03	.04
	N=(305)	N=(327)
Activity	.06	-.04
	N=(305)	N=(327)

Note: N is the number of student responses. They are correlated with 17 teacher responses.

some evidence on the point), but what do the children mean? We did not find, in administering the questionnaire to the children, that they showed such uncertainty in answering the question as to make the answers random. They probably mean something with reasonable consistency--the question is, what? This question is made more pertinent by the fact that although both student and teacher answers to the items vary significantly among classrooms, they do not vary together.

Further indirect evidence on student autonomy comes from our observational data. By observing the structure of classroom work in math, reading, and social studies for a day, we collected a good deal of evidence that bears on the degree of student choice built into the teaching methods and materials of the classroom. We used these data to construct an overall index characterizing each classroom by the level of student autonomy we perceived. These answers were slightly related to the teachers' responses in math (an insignificant r = .11 for 36 observed classrooms)[5] and reading (.25 for 45 classrooms),

[5] A sample of 36 classrooms was chosen for the classroom observation study. A sample of 17 classrooms was chosen for the student perception study. There are five classrooms in common between the two studies.

but were negatively related for social studies (-.37 for 21 classrooms). The observational data compared to the children's answers, for five classrooms for which both were available, showed a relationship (.35 for autonomy in both time and activities).

All in all, we do not take our observational data very seriously for two reasons: (1) They were collected very late in the school year, when classroom patterns--particularly in social studies classes--may have changed, (2) they were collected, typically, in one day. Assuming that classroom organization may vary a good deal from day to day, one would expect low correlations between classroom properties observed on any given day and similar properties assessed by teachers over longer periods of time. But the data do suggest, again, that the meaning of the children's answers to the autonomy questions requires interpretation.

One plausible interpretation is that the children, with typically limited time frames, are reporting events over the week or so prior to answering the questionnaire. The observation is also reporting a limited time view of the classroom situation; but the teachers are probably summarizing the events of the whole year. If the last weeks of the school year vary a great deal from the entire year, that might explain the low correlations between teacher and student answers.

Another explanation might be simply that children do not have any frame of reference within which to evaluate their school or their classroom. They have a comparative base for assessing their ability and self-concept, since these vary considerably within classrooms and even within ability groups. But how does a child say how much freedom he has in the classroom or school when he has very few experiences with any other classroom situations?

The child's conception of "autonomy" may also be more limited than that of the teacher in still another way, so that teachers and students could be referring to quite different notions of freedom of choice. That is, the third graders may have seen the question in a much more limited comparative framework than the teachers. For example, the students may see the opportunity for "their own choice" as arising only

in situations in which teachers present them with limited, explicitly personal choices: for example, "You may choose, in doing this picture, between crayons and watercolors," or "You may decide for yourselves whether to do the problems on the board first or those in the workbook first." Such trivial choices, formally delegated by the teachers to the students, may seem to the latter to be the meaning of their own formal right to decide something. Such choices might not even be seen by teachers as involving real student choice or autonomy. The fact that such choice situations are trivial to both student and teacher might account for the absence of a relationship between the students' accounts of having choices and their satisfaction with school.[6]

The larger choice situations teachers might notice could be occasions on which the student works out with the teacher the lines of work he will pursue. Teachers might be conscious of the extent to which the child's wishes and/or needs are taken into account in such complex classroom decisions. An observer during a short observation period would be unable to perceive such subtle behaviors.

From the point of view of the child, the overarching authority of the teacher may be the dominant factor in the situation; that is, the decision, in the child's mind, must be approved by (and takes place under the legitimate authority of) the teacher. From the child's point of view, such decisions, even though the outcome may be extremely satisfactory, are not made under his own jurisdiction. If this kind of autonomy, which may be quite satisfying to the child, does not enter into his own report of situations in which he decides what to do, we have another explanation of the lack of correlation between satisfaction and autonomy.

We have no way of exploring further, with these data, the meaning children gave to the autonomy questions. However, the suggestions we have made may have further implications.

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[6]Possibly the phrase "what kind of work" (Q2) meant "good or bad work" in the minds of some of the students when answering the activity autonomy question. This should not, however, account for the finding concerning the time autonomy question.

Students' Autonomy and Satisfaction

Accounting for the lack of association between the child's report of his autonomy and school satisfaction is a problem. None of our autonomy measures--neither students' nor teachers' reports--were related to students' satisfaction with school.

It is possible that many classroom situations in which students might reasonably be thought to have a good deal of choice represent to the child merely an absence of restraint. In such laissez faire classrooms, the students might have a great deal of formal freedom that means little to them. They would, in such classrooms, still be subject to the general educational expectation (presumably shared by teachers, parents, and the students themselves) that they make good progress in learning, and would be formally free to do so. But it seems likely--recalling that we are discussing eight-year-old third graders--that such a classroom might be experienced by the students as highly anomic and in a sense isolating. Constraint would be missing, but so would guidance and help. It may be that, given the uncertainties of studying and learning difficult subjects, freedom from constraint is not very satisfying to the child. This explanation would account for our general lack of association between measures of autonomy and child satisfaction with school. It would suggest that the presence of more guidance and structure in the classroom, which may have costs of its own, offers more help, clarity of work obligations, and personal satisfaction.

This line of reasoning gains force from earlier studies of elementary school teachers. We found (Meyer & Cohen, 1971) that elementary teachers in self-contained classrooms often experience a sense of powerlessness in their classrooms which is quite dissatisfying, and that the shifts to open space schools and team teaching--both of which involve a considerable loss of privacy, and, one would think, autonomy--are in fact often experienced as leading to increases in satisfaction and even autonomy.

In any case, the elementary school classroom may always be near enough to the edge of meaningless disorder that a good deal of structure

might provide greater satisfaction for both teacher and student. The self-contained classrooms in our present data, while probably not particularly structured or satisfying to teachers, may offer a little more clarity to the children to make up for any slight loss in flexibility. Another explanation for our surprising lack of results, i.e., lack of association between student autonomy and student satisfaction, lies, perhaps, in a faulty assumption in justifying the connection between student autonomy and student satisfaction. It is not necessarily the case that, given a complex classroom in which students have some degree of autonomy, the teacher is indeed able to guide each and every student into work that takes note of his particular interests and capabilities, or that the student is always capable of such a task. Management of a complex autonomous classroom is a factor that might well need to be reckoned with in further research.

These speculations gain force when we see what kinds of school support are needed to maintain what our observers defined as autonomous classrooms. Table 8.4 shows a series of correlations between observed classroom autonomy and various teacher descriptions of the school. We found that teachers who reported more helpful principals, more influential school policies concerning discipline, and higher rates of faculty interaction and influence were more likely to operate classrooms of the sort our observers saw as creating student autonomy.

It can be noted in Table 8.4 that the school features which seem to be required to maintain pupil autonomy are precisely ones that all our data suggest are in short supply in elementary schools. A high degree of school structuring and activity is rare, but may be important to help maintain classrooms that achieve more complexity in relation to the students. It may be, therefore, that in most classrooms in which teachers attempt to create autonomy and complexity in the experience of their students without structural supports, any gains they make are reduced in significance by the concomitant breakdown in guidance, help, and structure. Our evidence on the point is extremely weak, but it deserves further exploration.

TABLE 8.4

Correlations between School Factors and Observed Student Autonomy in the Classroom

School Factors (Measured by Teacher Questionnaire)	Correlation with Student Autonomy
1. Principal more helpful regarding teaching ideas	.31*
2. Principal more helpful regarding discipline backup	.09
3. School policy more influential regarding discipline	.22*
4. School policy more influential regarding curriculum	-.04
5. Talking informally more often about subject matter	.15
6. Talking informally more often about control	.15
7. Sharing materials more often in math	.30*
8. Sharing materials more often in reading	.33**
9. More faculty influence in curriculum	.09
10. Own influence greater in curriculum	.14

*p < .05
**p < .01

Conclusions

Students seem to be in awe of the larger structure of school and schoolwork. Most of this structure is a taken-for-granted part of their world, quite beyond their right or capacity to manipulate. Common experience suggests that they take their age and their grade in school as ultimate facts of life, not as matters to be negotiated. Our data clearly suggest that they approach the subject categories of school in the same way. Liking school means liking the formal tasks reified in the school structure--math, reading, social studies, and others. Liking school results from feeling good in general about oneself and feeling capable of dealing with these reified activities. Liking school is not, perhaps, a matter of being happy; it is a matter of being acceptable to the external, almost invisible authority system. If one is good at the main activities, one is at ease in the little universe of the school. In particular, if one has a reasonable amount of contact with the one visible manifestation of the transcending authority structure--one's teacher--one is satisfied. In light of this, we turn now to how autonomy might function.

Autonomy--the right to manipulate and reorder the school universe--may also have little meaning to the child. The larger set of obligations to learn is still there, with categories of knowledge the child must learn in order to become an adult and with standards of approval and disapproval. But this set of obligations is invisible to the autonomous child. In addition to doing the right thing, then, the autonomous child has to find out what the objectively right thing is--autonomy is sometimes confusing. The child may be uncertain, and as much can be lost by autonomy as is gained. This uncertainty might not exist if the child's tasks made technical sense in their own right--as learning a game does, for instance. (There is no point in arguing, with Fromm, that everyone is uncertain without authority, or, with Piaget, that authoritarianism and moral realism are inherent in early stages of children's development.) School is not, however, designed to make sense as an activity in its own right. It is part of growing

up, and it is organized by adults to create adults. It is not supposed to be for children to remain children. Thus, it makes great sense that third graders should be moral realists, and that their satisfaction should depend, not on autonomy, but on the moral canopy of the school. The best they can do is to find out their place in a moral system created from the point of view of others, to conform to that place, and in this fashion to obtain a measure of comfort.

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APPENDIX

QUESTIONNAIRES AND INTERVIEWS

2/16/73

SUPERINTENDENT QUESTIONNAIRE

To obtain an overall picture of your district, we would appreciate the following information.

1. Does your district have an organizational chart showing the relationships among the district's administrative and professional personnel?

   Yes _____ No _____

   IF YES: May we please have a copy?

2. Does your district have written job descriptions for your administrative and professional positions?

   All _____ Most _____ Some _____ None _____

   May we please have a copy of those job descriptions which are available?

3. What is the total number of certificated personnel in this district?

   _____

4. If your district is a unified school district, please indicate whether elementary education is defined as K-6, K-3, or some other combination of grade levels.

   ___K-6

   ___K-8

   ___Other (please specify)

We are interested in the elementary educational systems. In the case of unified districts, this requires asking you to separate personnel who are concerned primarily with elementary education from those concerned with secondary education.

We are not concerned with personnel whose work is indirectly related to the educational process in the classroom. In particular, we are not concerned with food service personnel, custodial and maintenance personnel or transportation personnel.

We are concerned with all others who have responsibilities in elementary education. This includes four categories:

(1) Persons who have general administrative responsibilities at the district level.

(2) Other administrators, who have responsibility for specialized staff functions at the district level.

(3) Other district-level professional or certificated staff, non-supervisorial.

(4) District-level persons who have direct instructional responsibilities for elementary school children.

We have obtained a list of your district-level staff members from the California Public School Directory. We have attempted to classify them according to the four categories listed above. Each of the following four questions deals with one of the staff categories. Please check over each list adding positions not shown or deleting those which have been eliminated. Also, if you feel that we have placed any positions in the wrong categories, please make corrections.

5. General Administration

This category is intended to include the chief administrative officers of the district who have some responsibilities for elementary education. It should include the superintendent and his chief assistants or associates who are in charge of elementary instruction, personnel, or business. It should not include persons who work only in secondary education or only with food service transportation, or the maintenance of buildings and grounds.

Position	Proportion of time spent in Elementary Education (Estimate if necessary)
Superintendent	
Director of Personnel.	
Assistant Superintendent of Operations . .	
Associate Superintendent	

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6. Administrators of Specialized Staff Functions

This category is intended to include other district level administrators who have responsibilities for special areas such as guidance, special education, multi-cultural education, curriculum, community relations and coordination of personnel in specific subject-matter areas. It should not include persons who do not supervise or evaluate other professional or certificated personnel.

Position	Proportion of time spent in Elementary Education (Estimate if necessary)
Director, Guidance and Special Services. . .	
Coordinator, Instructional Materials. . . . Center	
Director of Curriculum	

7. Non-Supervisorial District Staff with Specialized Functions

This category is intended to include professional or certificated persons who work at the district level, but who have not been included in the last two categories because they do not supervise or evaluate other professional or certificated personnel. These persons fall into two subcategories:

(a) Professional staff who work directly with elementary students in a non-instructional capacity (such as counselors, psychologists, and attendance personnel)

Position	No. of People	Total No. of full-time equivalents engaged in work related to Elementary Education
Psychologist		

(b) Professional staff who do not work directly with children (such as consultants, curriculum specialists, psychometrists, and accountants).

Position	No. of People	Total No. of full-time equivalents engaged in work related to Elementary Education
Consultant		

8. District-Level Staff with Direct Instructional Responsibilities

This category is intended to include teachers who are members of the staff of the district office. Such teachers usually provide services to more than one elementary school. Examples would include music teachers, special education, teachers, and physical education teachers who are supervised by district-office personnel (rather than by school principals).

Position	No. of People	No. of full-time equivalents

9. Please examine the answers to questions 5, 6, 7, & 8. Would you please estimate the number of district-level non-professional personnel who work in a support capacity for all these district-level professional personnel. This will include secretaries, file clerks, keypunch operators, receptionists, and those in similar positions.

Estimated Total: _____

10. Does your district allocate funds specifically for the purpose of hiring consultants from outside the district?

Yes____ No ____

IF YES, Approximately how much is budgeted for the current school year?

11. Printed Manuals and Documents

May we please have copies of any or all of the following documents which you may use in your district?

a) Manual of Policies of the Board of Education (or equivalent)

___ Yes, we have one ___Copy is available to researchers

b) Printed faculty handbook (or certificated employees handbook)

___ Yes, we have one ___Copy is available to researchers

c) Printed student code or handbook for elementary schools

___ Yes, we have one ___Copy is available to researchers

d) Handbook for elementary school principals, (or equivalent)

___ Yes, we have one ___Copy is available to researchers

e) Curriculum guide for teaching reading in elementary schools (or equivalent)

___ Yes, we have one ___Copy is available to researchers

f) Manual of evaluation procedures for professional employees

___ Yes, we have one ___Copy is available to researchers

g) Evaluation forms for professional employees

___ Yes, we have one ___Copy is available to researchers

12. Does your district regularly publish any kind of newsletter or report which provides information to school personnel?

Yes ___ No ___

IF YES: How often does it come out? _____

13. Are there elementary schools in the district which currently receive special state or federal program assistance which provides support or includes support for reading instruction in grades 1-3 (for example, Miller-Unruh or Title I funds)?

Yes ___ No ___

IF YES: Please list the sources of aid received, the approximate amounts, and the number of schools directly benefiting from these programs.

Sources of Aid	Approximate Amounts	No. of schools directly benefiting

14. a) Aside from special state or federal program assistance, does the district have other funds set aside from the regular budgeted items which elementary schools may request for the support of reading instruction?

Yes ___ No ___

b) IF YES: How much does your district make available to schools on an annual basis?

_____

15. Are there any elementary schools in the district which have, in the past two years, undergone major changes in their reading programs or approaches in grades 1 - 3?

Yes ___ No ___

IF YES: Please list the names of each school and describe the changes briefly.

School Name	Changes

16. Are there any elementary schools in your district which have, within the past two years, undergone major changes in their staffing arrangements, the use of teams, aides, teacher specialization, for example.

Yes ___ No ___

IF YES: Please list the names of each school and describe the changes briefly.

School Name	Changes

17. Do you ever assign district-level personnel to one or more elementary schools as a part of their training?

Yes_____ No_____

IF YES: How many people from the district office are typically involved as trainees in such a program at any given time?

_____

What types of district personnel are usually trained in this manner?

_____

_____

18. Do you ever assign teaching personnel to district level responsibilities as part of a training program for future administrators?

Yes _____ No _____

IF YES: How many teachers from your schools are typically involved in this training program at any given time?

_____

19. Is it your district's policy to rotate principals among schools on a regular basis?

Yes _____ No _____

IF YES: How often are they rotated? Every _____ years

20. Does your district permit elementary students to attend schools in the district other than their "assigned" school at their parents request?

Yes _____ No _____

IF YES: how many students were reassigned in this way? _____

21. Does the district provide special programs which involve transferring students from "assigned" schools to other schools in the district?

Yes _____ No _____

IF YES: Please list these programs and the approximate number of students in each.

22. We would like a summary of the number and functioning of standing district-wide committees in three areas of concern. Please include only committees which affect all the elementary schools in the district.

a. Committees concerned with the teaching of reading in grades 1-3. (This may include the selection of materials, teaching methods, evaluation of materials, or the training of staff for teaching reading.)

Committee Name	Number Participants	How often Committee Meets	Types of Participants (district staff, board of education, principal teachers, parents etc)

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b. Committees concerned with the recruitment, assignment, and working conditions of the professional teaching staff. (This may include committees concerned with selection of staff, salaries and benefits, for example.) These committees may be either advisory or decision-making.

Committee Name	No. of Participants	How often Committee Meets	Types of Participants (district staff, board of education, principals, teachers, parents, others)

13

c. Committees concerned with school-community relations. (This may include committees on multi-cultural education, public relations, for example.)

Committee Name	No. of Participants	How often Committee Meets	Types of Participants (district staff, board of education, principals, teachers, etc.)

14

Principal Questionnaire and
Superintendent Questionnaire

Your cooperation in filling out this questionnaire is very much appreciated.

We have provided this last page for any written comments you would like to make. Please feel free to detach this page from the rest of the questionnaire and hand your comments in anonymously.

Of course we would also welcome your direct (verbal) comments and criticisms about the questionnaire, or any other aspect of the research we have been doing. It would be most helpful to us if you did express any negative reactions you have had to this research project, so we can learn to improve our research methods in the future. In addition, we really do appreciate all the help you have given us and would like the opportunity to talk with you further, if you have questions or comments.

2/2/73

SUPERINTENDENT INTERVIEW

1. How long have you been superintendent here?

_____ years

2. How long have you been employed in this school district?

_____ years

3. How long have you been an educational administrator?

_____ years

INTERVIEWER: IF ADVANCE QUESTIONNAIRE WAS NOT FILLED OUT, SAY: I'd like to begin with the questionnaire we sent you earlier.

OTHERWISE, SAY: We want to thank you for responding to our advance questionnaire. There are a couple of questions I want to ask you about the committees listed on the earlier questionnaire.

4. We would like <u>your</u> assessment of the degree of influence each committee has in its own area. As I read the list of committees, please indicate the degree of influence exercised by each.

INTERVIEWER: GIVE RESPONDENT SCALE 1; READ COMMITTEE NAMES FROM PAGES 11-13 OF ADVANCE QUESTIONNAIRE AND RECORD RESPONSES IN MARGIN OF APPROPRIATE PAGE--11-13--OF ADVANCE QUESTIONNAIRE

5. In addition to principals, what school-level personnel does the district staff regularly evaluate?

6. In general, how frequently do you evaluate how well or poorly principals are performing as school administrators.

___a) More frequently than once a year

___b) Once a year

___c) Once every two years

___d) Once every three to five years

___e) Other (Please specify)

7. As you know, in order to evaluate any member of your staff, it is necessary to develop criteria or standards of evaluation and also to gather information on the performance of the staff member being evaluated.

a. What criteria or standards have been set to determine how well or poorly principals are performing as school administrators?

b. What types of information are collected to determine how well or poorly principals are performing as school administrators?

8. Which of the following statements most accurately characterizes the procedures used by elementary-school principals for the evaluation of teachers in this district?

___a) The district provides standard evaluation forms to principals and requires their use in evaluating teachers.

___b) The district provides standard evaluation forms to principals but the principals may choose whether or not to use them in evaluating teachers.

___c) The district does not provide standard forms, but provides written descriptions of criteria and procedures for principals in evaluating teachers.

___d) The principals are responsible for developing criteria and procedures for evaluating teachers.

___e) None of the above: The most accurate statement would be as follows:

9. Has the Stull Act required any changes in the evaluation procedures in this district?

Yes ___ No ___

IF YES: Briefly, what kinds of changes?

10. Does your district periodically gather information for the purpose of evaluating the overall performance of the individual (elementary) schools in your district?

Yes? ___ No ___

IF NO: ASK QUESTION 13 NEXT

IF YES: ASK THE FOLLOWING

11. How often is this type of school evaluation carried out? Would you say

___a) More than once a year

___b) Once a year

___c) Once every two or three years

___d) Only when a particular school seems to be having problems.

12. Do you use any of the following types of information in evaluating your district's (elementary) schools?

	Yes	No	Occasionally (Under what circumstances?)
a) Student scores on state mandated standardized tests.....			
b) Student scores on other ability or achievement tests.....			
c) Non-cognitive data on students such as attitudes or interests of students			

IF YES: Would you give me an example of the type of information used?

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INTERVIEWER: THIS QUESTION IS CONTINUED ON THE FOLLOWING PAGE

	Yes	No	Occasionally (Under what circumstances?)
d) Staff satisfaction with the school			

IF YES: Would you give me an example of the type of information used to measure staff satisfaction?

	Yes	No	Occasionally (Under what circumstances?)
e) Community satisfaction with the school			

IF YES: Would you give me an example of the type of information you use to measure community satisfaction?

	Yes	No	Occasionally (Under what circumstances?)
f) Information on curricular or program improvements by the school?			

IF YES: Would you give me an example of how you go about gathering such information?

Now we would like to ask you some questions on decision-making in your district. We realize that school systems differ in the way decisions are made. In some systems certain decisions are made primarily within the individual school, whereas in other systems the same decisions are primarily made at the district level.

13. In your system, would a decision on how to reorganize a particular (elementary) school's personnel primarily be made by the individual school or by the district office? (We have in mind here such decisions as whether to use teaching teams, whether to increase staff specialization, etc.)

___a) Primarily at the school level.

___b) Primarily at the district level.

14. In your own opinion, at what level should decisions concerning the reorganization of personnel within a particular elementary school be made?

___a) Primarily at the school level

___b) Primarily at the district level

15. In your system, if a decision were made to adopt a new reading program or a new approach to reading instruction in a particular school, would such a decision be made primarily by the individual school or by the district office?

___a) Primarily at the school level

___b) Primarily at the district level

16. In your own opinion, if a decision were made to adopt a new reading program or a new approach to reading instruction in a particular school, should this decision be made by the individual school or by the district office?

___a) Primarily at the school level

___b) Primarily at the district level

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17. In your system, when a particular school wishes to change the manner in which pupils are grouped for instructional purposes, would such a decision be made primarily by the individual school or by the district office? (For example, a school may wish to abolish a system of ability grouping.)

___a) Primarily at the school level

___b) Primarily at the district level

18. In your own opinion, if a particular school wished to change the manner in which pupils are grouped for instructional purposes, should this decision be made by the individual school or by the district office?

___a) Primarily at the school level

___b) Primarily at the district level

19. Suppose a school wished to adopt a new reading curriculum. We would like to know how explicit the district policies and procedures are which the principal would follow in seeking approval for this program. Would you say:

___a) This decision would be governed by explicit policy guidelines and established procedures.

___b) This decision would be governed by general policy guidelines only.

___c) This decision would be governed by informal or ad hoc arrangements.

20. How explicit are the district policies and procedures applying to the situation in which a particular school wishes to reorganize its staff for team teaching? Would you say:

___a) This decision would be governed by explicit policy guidelines and established procedures.

___b) This decision would be governed by general policy guidelines only.

___c) This decision would be governed by informal or ad hoc arrangements.

21. Suppose a school wished to adopt a new system of grouping pupils for instruction. How explicit are the policies and procedures applying to this situation? Would you say:

___a) This decision would be governed by explicit policy guidelines and established procedures.

___b) This decision would be governed by general policy guidelines only.

___c) This decision would be governed by informal or ad hoc arrangements.

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22. Would it be accurate to say that your district presently has a district-wide reading program or approach to reading for grades 1-3?

IF YES, ASK: Would you please describe it briefly?

23. It seems clear that there are advantages and disadvantages accompanying both the policy to diversify reading curricula among schools and the policy to make reading curricula the same or similar among various schools in the district. Nonetheless, we would like to know which you consider to be more appropriate for your district. Which of these would you say it is, all things considered?

INTERVIEWER: HAND RESPONDENT SCALE 2

___a) Highly valuable for schools to have the same reading program

___b) Somewhat valuable for schools to have the same reading program

___c) Somewhat valuable for schools to have different reading programs

___d) Highly valuable for schools to have different reading programs

24. How influential are the teachers' organizations within your district (CTA or AFT local chapter, or CEC) in these areas:

INTERVIEWER: HAND OUT SCALE 1

	Not at all Influen.	Slightly Influen.	Moderately Influen.	Very Influen.	Extremely Influen.
a. Salaries and fringe benefits					
b. Teaching conditions, such as class size and extra duties					
c. Curriculum decisions					
d. Decisions on professional staff assignments					
e. Decisions on the way pupils are assigned or grouped					

24a. Does any local teachers organization in your district (CTA local affiliate, AFT, or other) employ a paid director or executive secretary?

Yes_____ No_____

If yes, we would like to know which organizations employ such a paid director or executive secretary, and whether this person or persons is employed full time or only part time by the organization(s) in your district:

Organization employing paid director or executive secretary	Full time	or	Part time
CTA local affiliate	_____		_____
AFT	_____		_____
Other	_____		_____

25. I am going to read a (partial) list of the (elementary) schools in your district, and I would like to know how you would characterize each of them regarding their openness to change or willingness to experiment. Please rate each of the schools using a scale where +5 indicates very high interest in change and experimentation and -5 indicates very high resistance to change and experimentation. Zero should indicate the school's neutral stance. Please feel free to answer "don't know" if you are unable to assess a particular school.

26. We would like to know whether there are any (elementary) schools in the district which you feel are outstanding in either of the two following areas:

a. First, are there any (elementary) schools in the district which you feel are especially creative and effective in teaching reading? If so, please list up to 3 or 4 (SMALL DISTRICTS UP TO 2) schools and briefly indicate why you chose those schools.

School Name	Reason

b. Second, are there any (elementary) schools in the district which you feel have organized their personnel in an especially creative or unusual manner? If so, please list up to 3 or 4 (SMALL DISTRICTS UP TO 2) and briefly indicate why you chose those schools.

School Name	Reason

27. With regard to the adult community within which this district is located, which of these alternatives best describes the community climate regarding education?

CHOOSE 1:	CHOOSE 1:
___ Active	___ Innovative
___ Inactive	___ Traditional
___ Mixed	___ Mixed

28. In general, how much influence do parents and community groups have on decisions and planning in your district? Parents and/or community groups are:

___a) Extremely influential
___b) Very influential
___c) Moderately influential
___d) Slightly influential
___e) Not at all influential

Finally, I would like to ask you 3 questions concerning the way in which you see your own role as superintendent (as _____).

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29. First, we would like to know how you see your own role regarding educational change within your district. Please rate yourself on a scale from one to five, where five indicates that you are able to spend a great deal of time stimulating change within the district, and one indicates that you are able to spend almost no time in such activities.

_____ 1 - Almost no time
_____ 2
_____ 3
_____ 4
_____ 5 - A great deal of time

30. Second, we would like to know how you view your own position in relation to schools in the district. Do you see yourself more as the coordinator of the activities of separate and relatively autonomous school units, or more as the head of an integrated organization with schools as subunits of the larger whole?

___a) Coordinator of relatively separate and autonomous school units.
___b) Head of an integrated organization

31. Finally, it seems possible that someone in your position might well view his or her role as an educational leader or as an organizational manager. Recognizing that all superintendents are involved in both types of activities, which of these descriptions most accurately characterizes your present role as superintendent?

___a) Educational leader

___b) Organizational manager

That completes the information we need. Thank you very much.

SCALE 1

They are:

a. not at all influential

b. slightly influential

c. moderately influential

d. very influential

e. extremely influential

SCALE 2

They are:

a. highly valuable for schools to have the same reading program

b. somewhat valuable for schools to have the same reading program

c. somewhat valuable for schools to have different reading programs

d. highly valuable for schools to have different reading programs

PRINCIPAL QUESTIONNAIRE

In this section we ask for a summary of all personnel who work in your school, with the exception of custodians and nurses.

In order to get an accurate summary of your staff, we ask about the number of people, and also about the number of "full-time equivalents." A half-time counselor would be reported as one person, and 1/2 full-time equivalents. Three half-time secretaries would be reported as three persons, but 1 1/2 full-time equivalents. If necessary in the case of district personnel whose time in your school may fluctuate, estimate the proportion of time the person spends in your school.

1. Certificated personnel

This chart is intended as a summary of all paid certificated personnel who work in your school, except administrators. Every paid certificated person who works in your school either full-time or any fraction of time should be included. Some persons may be reported in more than one category, but no one person should be reported as more than one full-time equivalent. In cases of doubt, choose the best alternative. If no alternative is appropriate, please use the category labeled "other" with an explanatory note.

		School Staff		District Staff	
		No. of persons	Full-time equivalents	No. of persons	Full-time equivalents
a)	Regular classroom teachers				
b)	Teachers with special classes (e.g., teachers working with mentally gifted classes, educationally handicapped classes, etc.)				
c)	Teachers who do not have a regular class (e.g., remedial reading teachers, special teachers in art, music, phys. ed., etc.)				
d)	Psychologists				
e)	Counselors				
f)	Speech therapists				
g)	Librarians				
h)	Curriculum specialists . .				
i)	Others (please specify) . .				
	TOTALS.				

2. Administrators in this school:

Title	No. of persons *	Full-time equivalents
a) Principal		
b) Vice-principal.....		
c) Other administrative personnel (please specify).		

*NOTE: In the event that a person carries an administrative title but also carries a full-time teaching assignment, please note that above in the column for full-time equivalents.

3. How many clerical personnel are in this school?

Number of persons_____; Full-time equivalents _____.

4. How many paid teacher aides does your school employ?

Number of persons_____; Full-time equivalents _____.

5. How many adult volunteers (non-paid helpers) work in your school on a typical day? (If necessary, please estimate the average at any one time during the year.):

a) Adult volunteers working with teachers _____

b) Adult volunteers working in other capacities _____

Please estimate the number of hours spent in the school by the average adult volunteer per day:_____.

6. How many of the teachers in your school are tenured? _____

7. How many of your teachers have worked at this school?

___a) 1-3 years

___b) 4-8 years

___c) 9-12 years

___d) over 12 years

8. How long have you been principal of this school?____

How long have you been an educational administrator? _____

How long have you worked in this school district? _____

9. All schools have faculty meetings, but faculty meetings are organized differently in different schools. Which of the following is the most accurate description of faculty meetings in your school?

___a) Faculty meetings are primarily for communicating information and soliciting reactions from the staff to aid the administrative process.

___b) Faculty meetings are primarily occasions for making decisions and setting policies for the conduct of the school.

10. How often are faculty meetings held? _____ times per _____.

11. Does your school have any standing committees for dealing with school level matters such as curriculum, teaching methods, special programs, student discipline, etc.? If so, please list these committees and provide the information requested.

NAME OF COMMITTEE	How often it meets	No. of participants	Types of participants (parents, principal, teachers, etc.)	Description of Duties (if not clear from title)

12. Would you characterize any of your classrooms as those in which pupils are free to choose their own activities during a major portion of the school day?

Yes _____ No _____

IF YES: How many classrooms? _____

13. Would you characterize any of your classrooms as classrooms in which each pupil proceeds independently using a series of planned or programmed learning activities during a major portion of the school day?

Yes _____ No _____

IF YES: How many classrooms?

14. Has your school applied for any special district funds for instructional purposes during the last two years?

Yes _____ No _____

IF YES: How many times have you applied? _____

Please list the application for which you received such funds, and the approximate amount the school received.

Purpose of Application	Amount Received

15. Does your school receive special federal or state funds, such as Miller Unruh or Title III funds, for educational programs?

Yes _____ No _____

IF YES: Please explain the nature of the program or programs briefly, and give the approximate amount of the special funds.

Nature of the Program	Source (State or Federal)	Approximate Amount of Special Funds

16. Have these funds enabled you to create any additional positions?

Yes_____ No _____

IF YES: What types of positions are they and how many of each?

Type of Position	No.
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Principal Questionnaire and
Superintendent Questionnaire

Your cooperation in filling out this questionnaire is very much appreciated.

We have provided this last page for any written comments you would like to make. Please feel free to detach this page from the rest of the questionnaire and hand your comments in anonymously.

Of course we would also welcome your direct (verbal) comments and criticisms about the questionnaire, or any other aspect of the research we have been doing. It would be most helpful to us if you did express any negative reactions you have had to this research project, so we can learn to improve our research methods in the future. In addition, we really do appreciate all the help you have given us and would like the opportunity to talk with you further, if you have questions or comments.

PRINCIPAL INTERVIEW

PART A: STAFFING PATTERNS

INTERVIEWER: IF IN READING THROUGH THE QUESTIONNAIRE YOU FOUND ANY MISSING OR UNCLEAR RESPONSES, GO OVER THEM WITH THE PRINCIPAL AT THIS POINT.

1. I would now like to ask you about any teaming or collaborative relationships your teachers use in instruction. We recognize that there are a great variety of working relationships possible among teachers; therefore, rather than asking you for the number of "teams" you may have, I would like to know whether you have any small teacher groups who meet one or more of the criteria on this piece of paper.

INTERVIEWER: HAND PRINCIPAL SCALE 1 (FIVE TYPES OF COLLABORATION)

___Yes, I do ___No, I don't

IF NO: SKIP TO QUESTION 4 (P. 3)

IF YES: PROCEED AS FOLLOWS

Please tell me how many such groups you have, how many teachers are involved in each group, and which of the criteria on this list apply to each group.

List of Names of Collaborative Groups (Specify Subject Areas if Specialized)	No. of teachers in each group	Applicable Criteria (Circle the letter)
_____	_____	A B C D E
_____	_____	A B C D E
_____	_____	A B C D E
_____	_____	A B C D E
_____	_____	A B C D E
_____	_____	A B C D E
_____	_____	A B C D E

2. a) Now of all the teacher groups you listed above, which--if any--do you regard as really exemplary teams--that is teams which you would point out as models for other schools?

INTERVIEWER: IF THERE ARE ANY, ASK 2b
OTHERWISE, SKIP TO QUESTION 3

b) Is it possible for you to briefly identify the factors contributing to the success of these teacher groups?

3. a) Of all the teacher groups you have listed in question 1, which--if any--do you regard as having recurrent serious problems in working together?

INTERVIEWER: IF NO RESPONSE TO QUESTION 3, ASK QUESTION 4
OTHERWISE ASK 3b

b) Is it possible for you to briefly identify the nature of these recurrent problems?

4. Has your school developed a policy that encourages teacher collaboration or teaming?

___Yes ___No

IF NO: SKIP TO QUESTION 5
IF YES: ASK: a) Is this a formal written policy or a general atmosphere that encourages teacher collaboration or teaming?

___Formal ___General Atmosphere

5. From your personal viewpoint as principal, do you view teacher collaboration or teaming as:

___a) something that should be de-emphasized in your school?

___b) something that should be increased in your school?

___c) satisfactory at the present level in your school?

6. During the past two years, would you say that on the whole the level of teacher teaming or collaboration in your school has:

___a) increased?

___b) decreased?

___c) remained stable?

7. Does you school have any "open space pods" or other instructional spaces where two or more teachers regularly work at the same time?

___Yes ___No

IF NO: SKIP TO QUESTION 8
IF YES: ASK

a) How many such spaces? _____ With altogether how many teachers? _____

b) In these pods or open-space classrooms do the teachers generally teach in such a way that they are visible to each other while they work?

___in general, this is true.

___this is true for some, not for all.

___in general, this is not true.

c) Has the amount of such space changed significantly during the past two years?

___Yes, it has increased.

___Yes, it has decreased.

___No, it has remained about the same.

8. Are any of your classrooms multi-graded or ungraded?

___Yes ___No

IF NO: SKIP TO QUESTION 9
IF YES: ASK: a) How many? _____

b) How many of these are in "open space" areas? _____

c) What is the predominant criterion for assigning pupils to multi-graded or ungraded classrooms?

___academic criteria (such as achievement test scores)

___social or personality criteria

___other (please specify):

d) In assigning pupils to multi-graded or ungraded classes, would you say that you are trying to achieve classrooms that are:

___homogeneous

___heterogeneous

___other (please specify):

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9. Now considering your classrooms where all the pupils are in the same school grade, what is the predominant basis for assigning pupils to these classrooms?

___a) Academic criteria (such as achievement test scores)

___b) Social or personality criteria

___c) Other (Please specify)

PART B: SCHOOL DECISION-MAKING

As you know, schools differ in the matter of who is consulted or becomes involved when various decisions are made. In this section we ask about some specific decisions which are commonly made in the course of operating a school. We are interested in finding out which individuals or groups are consulted or become actively involved when these decisions are made in your school.

Please note that we are asking only about active involvement or consultation, not about the amount of influence these individuals or groups may have. For example, teachers may be actively involved in deciding whether to make changes in the school time schedule, but they may not be very influential in the matter.

Please be careful not to respond in terms of what should be the case by anyone's standards. We would like to know what the usual procedure actually is in practice in your school.

* * * *

10. Please score each person or group for each decision according to the following scale:

INTERVIEWER: HAND RESPONDENT THE SCALE FOR QUESTION 10.

1 - would never (or almost never) be consulted or become actively involved.

2 - would seldom be consulted or become actively involved.

3 - would occasionally be consulted or become actively involved.

4 - would usually be consulted or become actively involved.

5 - would always (or almost always) be consulted or become actively involved.

Active Participation or Involvement	Administrators or staff at the district office.	Principal	School faculty as a group	Teachers--individually or as a teaching team	Parents or community groups	No decision on this has ever occurred in this school
a. Decision to hire a new teacher (the specific decision resulting in a contract offer).						
b. Decision to adopt a new major reading curriculum to be used within this school.						
c. Decisions assigning pupils to classes and teachers for the next school year.						
d. Decision to make changes in the school schedule affecting the whole school.						
e. Decision to adopt individualized instruction or some other particular teaching method, in more than one class.						
f. A general policy decision on whether to use paid teacher aides in this school, given available funds.						
g. Deciding on the agenda for faculty meetings						
h. A decision to alter the professional assignments of staff members to permit greater specialization.						
i. A decision on the best course of action for handling a serious disciplinary problem.						
j. A decision whether to use ability grouping, or some other form of grouping of pupils, as a general policy for this school.						
k. A decision to develop a special course or unit not standard in the curriculum (such as ecology) within this school.						
l. Decisions establishing school policies on the use of the playground, buildings, and equipment (for the pupils and staff of this school).						

In the previous question we asked about the degree to which various persons and groups participate in certain specific decisions. In this section we ask which persons or groups have the predominant influence on the outcome of these decisions.

Please keep in mind that no judgments are being made on what the "right" way is. We would like to know how things work in practice.

* * * * *

11. On each of the decisions listed, please choose the statement from the list provided which most accurately describes how the matter is decided.

INTERVIEWER: HAND RESPONDENT THE SCALE FOR QUESTION 11

1 - this decision is basically made at the district level, with consultation with the principal and/or teachers.

2 - this decision is basically made by the principal, with consultation with teachers and/or district administrators.

3 - in practice, this decision is basically made by teachers, although the principal and perhaps district staff persons, are influential and involved.

4 - this decision is made at the school level, and in practice is shared quite equally between the principal and teachers.

5 - no decision on this matter has been made in this school; question cannot be answered.

	Choose the most appropriate statement from the scale for question 11; Indicate choice in this column	If answers "3" or "4" are chosen, ask the following: "By 'teachers' do you mean: a - the teacher or teachers affected by the decision. b - a committee, or c - the teaching staff as a group?"
a. Decision to hire a new teacher (the specific decision resulting in a new contract offer).	_____	. . . . _____
b. Decision to adopt a new major reading curriculum to be used within this school	_____	. . . . _____
c. Decisions assigning pupils to classes and teachers for the next school year	_____	. . . . _____
d. Decision to make changes in the school schedule affecting the whole school.	_____	. . . . _____
e. Decision to adopt individualized instruction or some other particular teaching method, in more than one class.	_____	. . . . _____
f. A general policy decision on whether to use paid teacher aides in this school, given available funds	_____	. . . . _____
g. Deciding on the agenda for faculty meetings	_____	. . . . _____
h. A decision to alter the professional assignments of staff members to permit greater specialization	_____	. . . . _____
i. A decision on the best course of action for handing a serious disciplinary problem	_____	. . . . _____
j. A decision whether to use ability grouping, or some other form of grouping of pupils, as a general policy for this school.	_____	. . . . _____
k. A decision to develop a special course or unit not standard in curriculum (such as ecology) within this school .	_____	. . . . _____
l. Decisions establishing school policies on the use of the playground, buildings, and equipment for the pupils and staff of this school	_____	. . . . _____

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Principal's Influence

There are many pressures on school principals, as we all know. Public schools do not select the pupils who will attend. The concerns and interests of parents, teachers and district administrators do not always coincide. Some things about any school cannot easily be changed.

We assume that your school has its share of difficulties and problems. Given the specific situation you are in, we would like your judgment about the amount of influence you as the principal can exert in a number of areas of concern which are common to schools.

* * * *

12. Compared to all the other factors influencing the situation, how influential are you, as principal, in the following matters?

	Extremely Influential	Very Influential	Moderately Influential	Slightly Influential	Not at all Influential
a. Carrying out the policies of the Board or District at the local school level.					
b. Determining specific methods used by teachers in their daily classroom work.					
c. Maintaining or achieving good morale and behavior on the part of pupils in the school.					
d. Helping weaker teachers improve the quality of their work with pupils.					
e. Maintaining or achieving good attitudes toward the school on the part of parents.					
f. Maintaining or achieving good teacher morale					
g. Developing and/or adopting improved curricula or programs in the school.					
h. Raising the level of achievement of pupils who are weak in reading and arithmetic.					

13. Suppose you and your staff desired to adopt a new reading curriculum for your school. We would like to know how explicit the district policies and procedures are which you would follow in seeking approval for this program.

___a) This decision would be governed by explicit policy guidelines and established procedures.

___b) This decision would be governed by general policy guidelines only.

___c) This decision would be governed by informal or ad hoc arrangements.

14. Suppose you wished to reorganize your staff for team teaching. How explicit are the district policies and procedures applying to the situation?

___a) This decision would be governed by explicit policy guidelines and established procedures.

___b) This decision would be governed by general policy guidelines only.

___c) This decision would be governed by informal or ad hoc arrangements.

15. Suppose you and your staff wished to develop a different method of grouping and assigning pupils for instructional purposes. How explicit are the district policies and procedures applying to the situation?

___a) This decision would be governed by explicit policy guidelines and established procedures.

___b) This decision would be governed by general policy guidelines only.

___c) This decision would be governed by informal or ad hoc arrangements.

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16. We would like to know how you see your own role regarding educational change within your school. Please rate yourself on a scale from one to five, where five indicates that you are able to spend a great deal of time stimulating change within the school, and one indicates that you are able to spend almost no time in such activities.

1 - almost no time
2 -
3 -
4 -
5 - a great deal of time

17. Which is the best estimate of the economic level of families whose children are served by your school:

Low-Income | Low-middle income | High-middle income | High-income | Mixed

IF MIXED, SAY: Please indicate the two most predominant income categories:

18. With regard to the adult community within which this school is located, which of these alternatives best describes the community climate regarding education:

Choose one:
___ Active
___ Inactive
___ Mixed

Choose one:
___ Innovative
___ Traditional
___ Mixed

19. In general how much influence do parents and community groups have on your school decisions and planning?

Parents and/or community groups are:
___a) Extremely influential
___b) Very influential
___c) Moderately influential
___d) Slightly influential
___e) Not at all influential

20. How influential is the teachers' organization(s) within your district (CTA or AFT local chapter, or CEC) upon decisions made within your school, in these areas:

SCALE
1 - not at all influential
2 - slightly influential
3 - moderately influential
4 - very influential
5 - extremely influential

___a) curricular decisions
___b) decisions on professional staff assignments
___c) decisions on the way pupils are assigned or grouped.
___d) school rules and regulations

PART C: READING PROGRAM

21. In your regular reading program in grades 1-3, how many teachers are there?

_____

22. How many classes are there? _____

23. In most classes in your regular reading program in grades 1-3, how many of the following types of personnel are present during a typical instructional period in a single classroom?

___a) Teacher(s)

___b) Paid aide(s)

___c) Adult volunteer(s)

___d) Student tutors from other schools

___e) Student tutors from other grade levels within this school

___f) Student tutors from the same grade level within this school

24. How many students are usually present in a class during reading instruction in grades 1-3?

_____

25. Approximately how many minutes a day is a child in grades 1-3 ordinarily involved in the reading program?

_____

26. In your reading program in grades 1-3, what sets of instructional materials are used? In how many classes is each of these used?

Materials	No. of classes

27. Is one of these sets of materials regarded as the main set of materials in grades 1-3?

Yes ___ No ___

IF YES: What set is it?

IF NO: Do half or more of the teachers in grades 1-3 use one of these sets of materials as a main set?

Yes ___ No ___

IF YES: What is it?

28. Now I would like to ask you about the way in which decisions are made about which materials and methods are used in your reading program in grades 1-3. First, concerning the materials:

	Materials	Methods
a) Each teacher decides independently which (materials/methods) to use	___	___
b) Teachers at the same grade level jointly determine the (materials/methods) to use	___	___
c) A committee of teachers in the school determines what (materials/methods) to use	___	___

INTERVIEWER: THIS COMMITTEE MAY INCLUDE ADMINISTRATORS

d) A district-wide committee determines what (materials/methods) to use	___	___

Now about the methods (answer a through d): ↑

29. Which of the following statements best characterizes your reading program in grades 1-3?

___a) Our reading program varies considerably among teachers at the same grade level in both materials and methods.

___b) Our reading program varies considerably among teachers at the same grade level in materials, although the methods used are about the same.

___c) Our reading program varies considerably among teachers at the same grade level in methods used, although the materials are about the same.

___d) Our reading program varies little in either methods or materials among teachers at the same grade level.

___e) Our reading program requires teachers at the same grade level to use the same methods and materials.

30. During reading instruction in most classes in grades 1-3, how much variation is there in the materials used?

___a) All students generally use the same materials.

___b) Students are divided into 2 or 3 groups, each group using different materials.

___c) Students are divided into 4 or more groups, each group using different materials.

___d) Each student uses different materials

___e) Don't know

INTERVIEWER: IF "b, c, or d" is checked, ASK 30A
OTHERWISE, ASK 31 NEXT

30A. What kinds of information are used as a basis for placing and transferring students among groups?
(IF MORE THAN 1 IS USED, PLEASE RANK ORDER THEM)

___a) Tests provided by the reading program.

___b) Tests prepared by the teacher(s)

___c) Current classroom performance

___d) Past teacher recommendations including how students were grouped in the past.

31. Within most classes in grades 1-3, how do students generally work during reading instruction?

___a) All students work at approximately the same pace.

___b) Students are divided into 2 or 3 groups working at different paces.

___c) Students are divided into 4 or more groups working at different paces.

___d) Each student works at his/her own pace.

___e) Other (Please specify)

___f) Don't know

INTERVIEWER: IF "b" or "c", ASK 32
OTHERWISE, SKIP TO 33

32. How stable are these groups?

___a) No one ever shifts between groups.

___b) There is the possibility of changing groups, but almost all students remain in the same group.

___c) The membership of these groups shifts occasionally.

___d) The membership of these groups shifts fairly often.

___e) Don't know

33. Which of the following statements best characterizes the working relationships in your school among reading teachers in grades 1-3?

___a) Teachers work fairly independently, but have knowledge of the materials and approaches used by other teachers.

___b) Teachers meet occasionally to coordinate materials and approaches used.

___c) Teachers meet frequently to coordinate materials and approaches used.

___d) Don't know

34. For grades 1-3, which of the following statements best characterizes the working relationships among teachers at earlier and more advanced grade levels?

___a) Teachers in grades 2 or 3 frequently consult with teachers in earlier grades about materials and approaches used.

___b) Teachers in grades 2 or 3 occasionally consult with teachers in earlier grades about materials and approaches used.

___c) Teachers in grades 2 or 3 consult on an ad hoc basis only with teachers in earlier grades about materials and approaches used.

___d) Teachers in grades 2 or 3 never or almost never consult with teachers in earlier grades about materials and approaches used.

___e) Don't know.

35. Do any of the following groups of people regularly work together on a day-to-day basis in your reading program in grades 1-3?
INTERVIEWER: RESPONDENT MAY ANSWER MORE THAN ONE

___a) Teachers at the same grade level

___b) Teachers at different grade levels

___c) Teachers and special staff personnel

___d) Teachers and administrators

36. Which of the following situations most closely represents the operation of your reading program in grades 1-3?

___a) Reading instruction is specifically integrated into other subject areas during the day.

___b) Reading instruction is basically concentrated into one or two time periods daily.

___c) Other (Please specify):

37. Does your school have any procedures for evaluating the success of the reading program in grades 1-3?

Yes ___ No ___

INTERVIEWER: IF NO, SKIP TO QUESTION 41
OTHERWISE, ASK 38, 39 & 40

38. How often is the evaluation performed? _____

39. Who is primarily responsible for carrying out this evaluation?

___a) District-level evaluators

___b) Principal

___c) Teachers

40. Which of the following types of information are gathered for the purpose of evaluating your reading program in grades 1-3?

INTERVIEWER: RESPONDENT MAY CHECK MORE THAN ONE

___a) Students' scores on achievement tests

___b) Other systematic data on student performance (for example, observational data, interest inventories, etc.) Please specify:

___c) Teachers' opinions about the reading program

___d) Students' opinions about the reading program

___e) Parents' or community members' opinions about the reading program

___f) Other evaluation information (Please specify what)

(IF MORE THAN 1 IS USED, PLEASE RANK ORDER THEM)

41. How satisfied are you as the Principal with the reading program in grades 1-3?

___a) Extremely satisfied

___b) Very satisfied

___c) Moderately satisfied

___d) Slightly satisfied

___e) Not at all satisfied

42. In your opinion, how satisfied are the teachers with the reading program in grades 1-3?

___a) Extremely satisfied

___b) Very satisfied

___c) Moderately satisfied

___d) Slightly satisfied

___e) Not at all satisfied

43. In your reading program for grades 1-3, how much choice do materials provide the teacher in assigning students work?

___a) The teacher has many alternative materials available when making a choice.

___b) The teacher has some alternative materials available when making a choice.

___c) The teacher has few materials available when making a choice.

___d) Don't know.

INTERVIEWER: IF "a" or "b", ASK QUESTION 44
OTHERWISE, SKIP TO QUESTION 45

44. Who provides the guidelines used by teachers to select materials appropriate for dealing with particular reading programs?

___a) Guidelines are supplied primarily by the developers of the reading program.

___b) Teachers work together to develop guidelines.

___c) Teachers independently develop guidelines.

___d) Don't know

45. Is the evaluation of students' progress in this reading program determined more by: (Circle one below)

Teaching Materials	The Teacher
1	2

46. Was special training of any type provided to help the teachers learn to use any of the materials in your reading program?

Yes ___ No ___

INTERVIEWER: IF NO, SKIP TO QUESTION 50 (P. 22)
IF YES, ASK QUESTIONS 47, 48, & 49

47. For which materials was this training provided?

48. What type of personnel were used in this training?
INTERVIEWER: YOU MAY CHECK MORE THAN ONE

___a) District personnel

___b) Consultant provided by the developer

___c) Other outside consultant

49. What types of training activities were used?

___a) Special presentations

___b) Short term workshops

___c) Summer training programs

___d) Ongoing in-service training

___e) Other (Please specify):

50. Would any of the materials and/or methods used in your school make it difficult for a substitute teacher to continue reading instruction in any of the classrooms in grades 1-3?

Yes ___ No ___

IF YES, ASK: How difficult? Would you say:

___a) Extremely difficult

___b) Very difficult

___c) Moderately difficult

___d) Slightly difficult

51. Have there been any major changes in your school's approach to reading in the last two years?

Yes ___ No ___

IF YES: Please describe these changes briefly.

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INTERVIEWER: IF YES TO QUESTION 51, ASK QUESTION 52
OTHERWISE ASK QUESTION 53 NEXT

52. Who has been chiefly responsible for these changes of the original program?

___a) Individual teachers

___b) Groups of teachers

___c) Specialists

___d) The Principal

___e) District-level personnel

PART D: EVALUATION

Now we want to ask you some questions about how you evaluate teachers in the reading program in grades 1-3. For example, you may compliment teachers on their good work periodically or criticize them for mistakes; you may occasionally give them formal written evaluations; you may simply indicate your judgments of their performance with a smile or a frown, or you may look at how they are doing and say nothing, and yet they may know whether or not you are satisfied.

In general, when you indicate in any way, directly or indirectly, how well or poorly you think a teacher is doing, you are giving an evaluation. Please remember that what we mean by evaluations includes much more than formal, written evaluations.

53. In general, how frequently do you evaluate how well or poorly teachers are doing on the task of teaching reading ingrades 1-3?

___a) Very frequently

___b) Frequently

___c) Fairly often

___d) Occasionally

___e) Seldom

___f) Almost never

___g) Never

54. As you know, in order to evaluate any member of your staff, it is necessary to develop criteria or standards of evaluation and also to gather information on the performance of the staff member being evaluated.

a. What criteria or standards have been set to determine how well or poorly teachers are performing on the task of teaching reading in grades 1-3?

b. What types of information are collected to determine how well or poorly teachers are performing on the task of teaching reading in grades 1-3?

55. In your opinion, to what extent do teachers have knowledge of the criteria which you use to determine how well or poorly they are doing on the task of teaching reading in grades 1-3?

___a) Teachers have a great deal of knowledge

___b) Teachers have considerable knowledge

___c) Teachers have some knowledge

___d) Teachers have little knowledge

___e) Teachers have no knowledge

56. In general, in your view, how influential are the following persons or groups in determining the criteria which you use to judge how well or poorly teachers are doing on the task of teaching reading in grades 1-3?

	Extremely Influential	Very Influential	Moderately Influential	Slightly Influential	Not at all Influential
a) Superintendent or Assistant Superintendent					
b) You, as Principal					
c) Assistant Principal (if any)					
d) The faculty of the school					
e) Individual teachers in the reading program					
f) District-wide committees					
g) Parents					
h) Students					

57. In general, in your opinion, how influential should the following persons or groups be in determining the criteria which you use to judge how well or poorly teachers are doing on the task of teaching reading in grades 1-3?

	Extremely Influential	Very Influential	Moderately Influential	Slightly Influential	Not at all Influential
a) Superintendent or Assistant Superintendent					
b) You, as Principal					
c) Assistant Principal (if any)					
d) The faculty of the school					
e) Individual teachers in the reading program					
f) District-wide committees					
g) Parents					
h) Students					

58. How satisfied are you with the way the criteria are determined for judging how well or poorly teachers are doing on the task of teaching reading in grades 1-3?

___a) Extremely satisfied
___b) Very satisfied
___c) Moderately satisfied
___d) Slightly satisfied
___e) Not at all satisfied

59. Does the district provide standard teacher evaluation forms for your use in evaluating teachers in your school?

Yes ___ No ___

Have you developed standard evaluation forms for your own use in evaluating teachers in your school?

Yes ___ No ___

IF YES: May we have a copy?

60. Does the district provide written descriptions of evaluation criteria and procedures for your use in evaluating teachers in your school?

Yes ___ No ___

61. Does the district expect you to keep records containing systematic information pertaining to your evaluation of teachers?

Yes ___ No ___

62. Has the Stull Act required any changes in evaluation procedures in your school or district?

Yes ___ No ___

IF YES: Please describe them.

63. Does your district periodically gather information for the purpose of evaluating the overall performance of the individual schools in the district?

Yes ___ No ___

INTERVIEWER: IF "NO", THIS IS THE END OF THE INTERVIEW

IF "YES", ASK QULSTION 64, etc.

64. How often is this type of overall evaluation carried out by the district for your school?

INTERVIEWER: YOU MAY CHECK MORE THAN 1, WITH AN EXPLANATION

___a) More than once a year

___b) Once a year

___c) Once every two or three years

___d) Only when a particular school seems to be having problems

65. Does the district routinely gather any of the following types of information in evaluating the performance of your school?

	Yes	No	Occasionally (Explain under what circumstances)
a) Student scores on state mandated standardized tests			
b) Student scores on other ability or achievement tests			
c) Non-cognitive data on students, such as personality or interest inventories			
d) Staff satisfaction with the school (Please give an example of the type of information used to measure this.)			
e) Community satisfaction with the school (Please give an example of the type of information used to measure this.)			
f) Information on curricular or program improvements by the school.			

That completes the information we need. Thank you.

TO BE USED WITH PRINCIPAL INTERVIEW QUESTION

1

Teacher Collaboration or Teaming Criteria

A. Teachers divide children into groups according to either subject matter or ability and rotate students among groups.

B. Teacher group meets at least every other week for one or more of the following purposes: planning of instruction, evaluation of student progress, and/or coordination of student discipline.

C. Teacher group members work directly with each other in instruction; that is, teachers jointly teach the same lesson to the same group of pupils.

D. Teacher group is collectively responsible for its students, who are really assigned to the group as a whole rather than to any individual member.

E. Teacher group designates an official leader to coordinate the group's program with other teachers and with your office.

Principal Interview

SCALE FOR USE WITH QUESTION 10

1 - would never (or almost never) be consulted or become actively involved.

2 - would seldom be consulted or become actively involved.

3 - would occasionally be consulted or become actively involved.

4 - would usually be consulted or become actively involved.

5 - would always (or almost always) be consulted or become actively involved.

Administrators or staff at the district office

Principal

School faculty as a group

Teachers -- individually or as a teaching team

Parents or community groups

Principal Interview

SCALE FOR USE WITH QUESTION 11

1 - This decision is basically made at the district level, with consultation with the principal and/or teachers.

2 - This decision is basically made by the principal, with consultation with teachers and/or district administrators.

3 - In practice, this decision is basically made by teachers, although the principal and perhaps district staff persons, are influential and involved.

4 - This decision is made at the school level, and in practice is shared quite equally between the principal and teachers.

5 - No decision on this matter has been made in this school; question cannot be answered.

TEACHER QUESTIONNAIRE

School Code _____

School Name _____

Introduction

The Stanford Center for Research and Development in Teaching, funded by the newly formed National Institute of Education, is charged with doing research which will both build a body of knowledge about education and also provide immediately useful feedback to schools and teachers. To this end, our project, "The Environment for Teaching Program", is requesting your cooperation in completing this questionnaire. This questionnaire is an important part of the most extensive study we have undertaken, although the foundation for it has been built by a series of smaller studies completed during the past four years. The study includes interviews with superintendents and principals of 33 school districts and 200 Bay Area elementary schools, and the selection of your school and 17 others for in-depth study. It is very important that the views of every teacher in these 18 schools be taken into account. We are therefore indebted to you for your cooperation.

Our field tests with other teachers indicate that the questionnaire will take you about 45 minutes to complete. It is that long because our research team, composed of scholars in the area, past teachers, and current teachers, felt it necessary to get as full a picture of each school as possible in order to insure that the results of the research will be useful to teachers. Our research goal is to get information about the way schools are organized and about various aspects of curriculum and instruction such as materials, methods and student grouping. Once obtained, this information will be analyzed to help us determine the relationship between elements of organization and aspects of curriculum and instruction. Ultimately this analysis will enable us to offer specific guidance in designing school organizations appropriate for a wide range of curricula--from the most traditional to the most novel.

Your school will receive a full report of all our findings, including a handbook containing the practical implications of our research. In addition, you will receive summary reports of this and other research via our newsletter.

We have attempted to make the questionnaire easy to complete quickly. Most questions are answered by circling or checking the number which corresponds to the appropriate answer category. Since the questionnaire must serve different schools, however, some items may seem inappropriate for your situation. Please answer them as accurately as possible and feel free to add comments in the spaces provided at the end of each section. Please ignore the numbers in parentheses which appear throughout the questionnaire as they are for computor use only.

One very important assurance: your responses will be treated absolutely confidentially. Our findings will always be reported in ways guaranteeing that you and your school will not be identifiable.

One of your colleagues has been appointed as liaison person between your school and the Stanford Center. If you have any questions about the questionnaire or the research please contact them. They will also provide you with instructions for returning the questionnaire after you have sealed it carefully in the envelope provided.

Thank you.

Background questions

(1-10) 1. What is your sex?

___male

___female

(11) 2. What is your age?

___1) under 30

___2) 31-40

___3) 41-50

___4) over 50

(12) 3. How many years have you taught at this school, counting this year?

___1) 1-2 years

___2) 3-5 years

___3) 6-10 years

___4) 11-20 years

___5) over 20 years

(13) 4. How many years have you taught at this and other schools, counting this year?

___1) 1-2 years

___2) 3-5 years

___3) 6-10 years

___4) 11-20 years

___5) over 20 years

5. Which grade(s) do you teach?

_____

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(14) 6. In which type of classroom space do you usually teach? (check one)

___1) Open space

___2) Classrooms separated by movable partitions--which are open most of the time

___3) Classrooms separated by movable partitions--which are closed most of the time

___4) Self-contained classroom

___5) Other, please specify_____

This questionnaire contains a number of questions which ask you to answer separately for each of three subject areas--mathematics, reading and social studies. We realize that some schools may not divide up curriculum subjects in precisely this way. If this is the case in your school, please answer for your subjects that are nearly the same as these three (e.g. if you have "language arts" but not "reading", answer for language arts under "reading").

If you do not teach a subject, then please leave any answer spaces for that subject blank during the rest of the questionnaire.

(15-17) 7. Do you teach:

Math:		Reading:		Social Studies:	
(15)	___yes	(16)	___yes	(17)	___yes
	___no		___no		___no

First we would like to ask you about the way students are assigned to your class and about the way they may be moved between classes.

(18) 8. On what basis are students assigned to your class(es)?
(Check the one which best applies.)

___1) Each of my class(es) is assigned students at mixed levels of performance.

___2) Each of my class(es) is assigned students at a particular level of performance.

___3) At least one of my classes is assigned students at mixed levels of performance, and at least one is assigned students at a particular level of performance.

___4) I don't know how performance level is taken into account in the assignment of students to my class(es).

___5) Other, please specify _____

(19) 9. Which of the following most accurately applies to you? (check one)

___1) I teach the same students throughout the whole school day.

___2) I teach the same students during most subjects, but have different students for a few subjects.

___3) I teach the same subjects to different sets of students.

___4) I teach different subjects to different sets of students.

___5) Other, please specify_____

_____

For the purposes of this study to "cross-group" students refers to the practice of sending some or all of your students to another teacher for a particular lesson, or receiving some or all of another teacher's students for your lesson(s). This might be done, for example, to allow teachers to take students who are more nearly at the same level, to allow students to pick the activity they want most for a period, or so teachers may teach the subject(s) they prefer.

(20-22) 10. How frequently do students who are cross-grouped move between your class and another teacher's class?
(Please circle the most appropriate number in each column.)

	Math (20)	Reading (21)	Social Studies (22)
Once a day	1	1	1
Several times a week	2	2	2
Once a week	3	3	3
Once or twice a month	4	4	4
Less than once a month	5	5	5
My students are not cross-grouped	0	0	0

If you answered "0" for all subjects, please go on to question number 12.

(23-25) 11. How far ahead of time are your cross-grouping decisions usually made?

	Math(23)	Reading(24)	Social Studies(25)
Decided at the beginning of the year	1	1	1
A month to several months ahead of time	2	2	2
A week ahead of time	3	3	3
Several days ahead of time	4	4	4
A day ahead of time	5	5	5
Arranged on the day it occurs	6	6	6

(26-37) 12. Please rank the following four categories for each subject, to show which way your students are organized most frequently (rank=1), second most frequently (rank=2) and so forth.

	Math	Reading	Social Studies
	Rank:	Rank:	Rank:
Whole class grouped together	___(26)	___(30)	___(34)
Two or three groups	___(27)	___(31)	___(35)
Four or more groups	___(28)	___(32)	___(36)
Students worked individually	___(29)	___(33)	___(37)

(38-40) 13. If you sometimes break the class into groups, how often do you try to make the members of each group approximately similar in ability?

	Math(38)	Reading(39)	Social Studies(40)
a) Always	1	1	1
b) Usually	2	2	2
c) Fairly often	3	3	3
d) Occasionally	4	4	4
e) Seldom or never	5	5	5
f) I rarely break the class into groups	0	0	0

(41-43) 14. If the class is sometimes broken into groups for a subject, how often would you say the membership of groups changes?

	Math(41)	Reading(42)	Social Studies(43)
a) Everyday	1	1	1
b) Several times a week	2	2	2
c) Once a week	3	3	3
d) Once or twice a month	4	4	4
e) Less than once a month	5	5	5
f) I rarely break the class into groups	0	0	0

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Teacher Collaboration

This next section deals with the ways in which you may collaborate with other teachers in your school.

(44) 15. Which of the following most accurately applies to you: (check one or more)

___1) I usually plan and teach my lessons by myself.

___2) I often take turns with other teachers in planning and presenting lessons to students.

___3) I often work together with other teachers in planning lessons, but present them mostly to my own classes.

___4) I often work with other teachers to jointly plan and present lessons to a combined group of students.

___5) Other, please specify _____

_____

If you work with other teachers in any one or more of the following ways, you are considered to be a member of a teaching team for the purposes of this study:

a) Planning of instruction together

b) Evaluation of student progress

c) Joint teaching of a class

d) Coordinating student discipline

(45) 16. Then, are you a member of a teaching team?

___yes

___no

If you are not, please go on to question number 33.

If you are, please continue.

(46) 17. Are you a member of more than one team?

___yes

___no

If you are, please answer for the team which involves more of your teaching time.

(47-51) 18. What subjects are taught by this team?

Math(47)	Reading(48)	Social Studies(49)	All Subjects(50)	Other _____(51)
___yes	___yes	___yes	___yes	___yes
___no	___no	___no	___no	___no

(52) 19. How many teachers are on your team?

_____(number)

(53) 20. Which most accurately characterizes your team?

___1) It is collectively responsible for a common group of students in all subjects.

___2) It is collectively responsible for a common group of students in one or more subjects, but not in all subjects.

___3) Students are really assigned to individual teachers who are individually responsible for them.

(54) 21. Which most accurately describes your team? (check one)

___1) It has a formally designated leader who is given extra released time.

___2) It has a formally designated leader who is not given extra released time.

___3) It does not have a formal leader, but one member informally provides leadership in most areas.

___4) It does not really have a leader; some members lead in some areas and some in others.

If you checked "4", please skip to question number 23.

(53) 22. If your team has a team leader, either formal or informal, are you the leader?

___yes
___no

(58) 23. How frequently does your team hold regular or impromptu meetings?

___1) Several times a day
___2) Once a day
___3) Several times a week
___4) Once a week
___5) Once or twice a week
___6) Less than once a month

(57) 24. How frequently does your principal sit in on your team meetings?

___1) Always
___2) Usually
___3) Fairly often
___4) Occasionally
___5) Seldom
___6) Almost never or never

(65)
(66)
(67)
(68)
(69)

(55) 25. How frequently would you say you meet with other members of your team on a social (non-work) basis? (e.g. lunchtime, after school, weekends)

___1) At least once a day
___2) Several times a week
___3) Once a week
___4) Once or twice a month
___5) Less than once a month

(70)
(71)
(72)
(73)
(74)

(59-61) 26. How frequently do you jointly conduct activities or lessons with another (other) teacher(s) for a common group of students?

	Math(59)	Reading(60)	Social Studies(61)
At least once a day	1	1	1
Several times a week	2	2	2
Once a week	3	3	3
Once or twice a month	4	4	4
Less than once a month	5	5	5
Never	6	6	6

If you answered "Never" for every subject, please skip to question number 28.

(62-64) 27. How far ahead of time are your jointly conducted activities usually decided on?

	Math(62)	Reading(63)	Social Studies(64)
Arranged on the day they occur	1	1	1
A day ahead of time	2	2	2
Several days ahead of time	3	3	3
A week ahead of time	4	4	4
A month or more ahead of time	5	5	5

28. To what degree would you say your team has developed rather explicit team policies or agreements affecting... (Please circle the most appropriate number in each row.)

	A Great Deal	A Considerable Amount	A Moderate Amount	A Little	None	Not Applicable
Instructional methods	1	2	3	4	5	0
Lesson content and materials to be taught	1	2	3	4	5	0
Standards of student control and discipline	1	2	3	4	5	0
The way students are to be grouped and moved	1	2	3	4	5	0
The schedule of subjects and activities	1	2	3	4	5	0

29. How influential are other members of your team on...

	Extremely Influential	Very Influential	Moderately Influential	Slightly Influential	Not At All Influential	Not Applicable
The instructional methods you use	1	2	3	4	5	0
The lesson content and materials you use	1	2	3	4	5	0
The standards of student discipline and control you use	1	2	3	4	5	0
The way you group and move students	1	2	3	4	5	0
The schedule of lessons and activities you follow	1	2	3	4	5	0

30. How much influence, in practice, does each of the following have in determining the content of your team meetings?

		Extremely Influential	Very Influential	Moderately Influential	Slightly Influential	Not At All Influential	Not Applicable	
(75)	The principal	1	2	3	4	5	0	(18-20)
(76)	Team Leader	1	2	3	4	5	0	
(77)	You	1	2	3	4	5	0	
(78)	Other team members	1	2	3	4	5	0	

31. How much influence should each of the following have in determining the content of your team meetings?

		Extremely Influential	Very Influential	Moderately Influential	Slightly Influential	Not At All Influential	Not Applicable	
(1)	The principal	1	2	3	4	5	0	(21-23)
(2)	Team Leader	1	2	3	4	5	0	
(3)	You	1	2	3	4	5	0	
(4)	Other team members	1	2	3	4	5	0	

32. How satisfied are you with your team in each of the following areas?

		Extremely Satisfied	Very Satisfied	Moderately Satisfied	Slightly Satisfied	Not At All Satisfied	
(14)	The extent to which resources are shared	1	2	3	4	5	
(15)	Openness in commenting on each other's teaching	1	2	3	4	5	
(16)	Ability to plan together effectively	1	2	3	4	5	(24-26)
(17)	Flexibility in scheduling classes and activities	1	2	3	4	5	

Do you have any other comments on your grouping or teaming practices?

_____

_____

_____

Curriculum

Next we would like to ask you some questions about the curriculum and instructional methods you use.

33. To what degree would you say your instructional program--lessons or concepts--has to be presented in a particular order, in each subject? (Circle the most appropriate number in each column.)

	Math(18)	Reading(19)	Social Studies(20)
a) Order very important	1	1	1
b) Order moderately important	2	2	2
c) Order slightly important	3	3	3
d) Order not at all important	4	4	4

34. In general, how much variation is there in the materials your students use in each subject? (Check the most accurate answer.)

	Math(21)	Reading(22)	Social Studies(23)
a) All students generally use the same materials	1	1	1
b) Students are divided into 2 or 3 groups, each group using different materials	2	2	2
c) Students are divided into 4 or more groups, each group using different materials	3	3	3
d) Each student uses different materials	4	4	4

35. How often are students in your class(es) free to choose their own activities in each subject area?

	Math(24)	Reading(25)	Social Studies(26)
Always	1	1	1
Usually	2	2	2
Fairly often	3	3	3
Occasionally	4	4	4
Seldom	5	5	5
Never	6	6	6

(27-35) 36. How often do most of your students engage in each of the following types of activities as part of their instruction within each subject?

a. Working puzzles or playing games (e.g., scrabble):

	Math(27)	Reading(28)	Social Studies(29)
Everyday	1	1	1
Several times a week	2	2	2
About once a week	3	3	3
Once or twice a month	4	4	4
Less than once a month	5	5	5

b. Making things (e.g., drawing or building something):

	Math(30)	Reading(31)	Social Studies(32)
Everyday	1	1	1
Several times a week	2	2	2
About once a week	3	3	3
Once or twice a month	4	4	4
Less than once a month	5	5	5

c. Working with audio-visual materials, individually or in small groups:

	Math(33)	Reading(34)	Social Studies(35)
Everyday	1	1	1
Several times a week	2	2	2
About once a week	3	3	3
Once or twice a month	4	4	4
Less than once a month	5	5	5

Teachers differ in the number of rules or guidelines they establish for their classes in various areas (i.e., rules or guidelines students know will be followed). In each of the following three questions, please indicate the approach you take.

(36) 37. How many rules or guidelines do you establish for your class(es) regarding student conduct and discipline?

___1) Many
___2) A considerable number
___3) Some
___4) Few
___5) None

(37) 38. How explicitly do you define for your class(es) the methods by which students' academic performances will be evaluated?

___1) Very
___2) Moderately
___3) Somewhat
___4) Slightly
___5) Not at all

39. When you evaluate a student at the end of some period of time, you may consider many factors. Four such factors are listed below. Please rank them to show which you emphasize most in evaluating a student. (1 = most important, 2 = second most important, etc.)

	Rank
How each student's work compares to the work done by the rest of the class	(38) ___
Whether the student's work meets criteria set for all students at his/her level	(39) ___
The amount of improvement the student has shown during the year, regardless of actual level of performance	(40) ___
How hard the student has worked, regardless of actual level of performance	(41) ___

(42-44) 40. If you had to be absent for a few days and wanted your class(es) to continue as if you were there, how difficult would it be to instruct a substitute so that he/she could teach your subjects in the way you usually teach them?

	Math(42)	Reading(43)	Social Studies(44)
Extremely difficult	1	1	1
Very difficult	2	2	2
Moderately difficult	3	3	3
Slightly difficult	4	4	4
Not at all difficult	5	5	5

41. In addition to your state adopted texts, what curriculum materials (e.g., texts, kits) have you used most frequently during the current school year, in each subject? Please write the names of up to three.

Math	Reading	Social Studies
_____	_____	_____
_____	_____	_____
_____	_____	_____

The next two questions concern your reading program. If you do not teach reading, skip to question number 44.

(45-46) 42. Which procedure best describes the way in which decisions are made about which materials you use and about which methods you use in teaching reading? (Check the most appropriate answer for each.)

	Materials(45)	Methods(46)
a) I decide independently which to use	1	1
b) Teachers at my grade level jointly decide which to use	2	2
c) A committee of teachers in the school determines which to use	3	3
d) A district-wide committee determines which to use	4	4

(47) 43. Which of the following statements best characterizes the working relationships you have with other reading teachers (including both team members, if applicable, and others)? (Check one)

___1) I work fairly independently but have knowledge of the materials and approaches used by other teachers.

___2) I meet with other teachers occasionally to coordinate materials and approaches used.

___3 I meet frequently with other teachers to coordinate materials and approaches used.

Do you have any other comments on your curriculum or instructional methods?

_____

_____

_____

Decision Making

The next questions ask about the influence of different persons or groups in your school regarding several decisions areas. If you are not a member of a teaching team, please leave the appropriate line in each question blank.

44. In decisions regarding the content of the lessons you teach students of a particular grade or subject, how influential is each of the following persons or groups? (Please circle the most appropriate number in each row.)

		Extremely Influential	Very Influential	Moderately Influential	Slightly Influential	Not At All Influential	Don't Know
(48)	District personnel	1	2	3	4	5	0
	The principal	1	2	3	4	5	0
	The faculty	1	2	3	4	5	0
	Your teaching team	1	2	3	4	5	0
	You	1	2	3	4	5	0
	Parents	1	2	3	4	5	0
	Other (please specify) _____	1	2	3	4	5	0

45. In your opinion, how influential should each of the following persons or groups be in decisions regarding the content of the lessons you teach students of a particular grade or subject?

		Extremely Influential	Very Influential	Moderately Influential	Slightly Influential	Not At All Influential
(55)	District personnel	1	2	3	4	5
(56)	The principal	1	2	3	4	5
(57)	The faculty	1	2	3	4	5
(58)	Your teaching team	1	2	3	4	5
(59)	You	1	2	3	4	5
(60)	Parents	1	2	3	4	5
(61)	Other (please specify) _____	1	2	3	4	5

46. In decisions regarding the best course of action for handling serious disciplinary problems, how influential is each of the following persons or groups?

		Extremely Influential	Very Influential	Moderately Influential	Slightly Influential	Not At All Influential	Don't Know
(62)	District personnel	1	2	3	4	5	0
(63)	The principal	1	2	3	4	5	0
(64)	The faculty	1	2	3	4	5	0
(65)	Your teaching team	1	2	3	4	5	0
(66)	You	1	2	3	4	5	0
(67)	Parents	1	2	3	4	5	0
(68)	Other (please specify) _____	1	2	3	4	5	0

47. In your opinion, how influential should each of the following persons or groups be in decisions regarding the best course of action for handling serious disciplinary problems?

		Extremely Influential	Very Influential	Moderately Influential	Slightly Influential	Not At All Influential
(69)	District personnel	1	2	3	4	5
(70)	The principal	1	2	3	4	5
(71)	The faculty	1	2	3	4	5
(72)	Your teaching team	1	2	3	4	5
(73)	You	1	2	3	4	5
(74)	Parents	1	2	3	4	5
(75)	Other (please specify) _____	1	2	3	4	5

48. In deciding on the agenda for faculty meetings, how influential is each of the following persons or groups?

		Extremely Influential	Very Influential	Moderately Influential	Slightly Influential	Not At All Influential	Don't Know
(9-10)	District personnel	1	2	3	4	5	0
(11)	The principal	1	2	3	4	5	0
(12)	The faculty	1	2	3	4	5	0
(13)	Your teaching team	1	2	3	4	5	0
(14)	You	1	2	3	4	5	0
(15)	Other (please specify) _____	1	2	3	4	5	0

49. In decisions regarding how pupils will be assigned to classes and teachers, how influential is each of the following persons or groups?

		Extremely Influential	Very Influential	Moderately Influential	Slightly Influential	Not At All Influential	Don't Know
(16)	District personnel	1	2	3	4	5	0
(17)	The principal	1	2	3	4	5	0
(18)	The faculty	1	2	3	4	5	0
(19)	Your teaching team	1	2	3	4	5	0
(20)	You	1	2	3	4	5	0
(21)	Other (please specify) _____	1	2	3	4	5	0

Schools differ in the number and type of school wide policies or guidelines established in various areas. The next three questions ask you about policies and guidelines at your school, regardless of who established them (e.g., district, principal or faculty).

(22) 50. How much do school wide policies or guidelines govern student conduct at your school?

___1) A great deal
___2) A considerable amount
___3) A moderate amount
___4) Slightly
___5) Not at all
___6) Don't know

(23) 51. How much do schoolwide policies or guidelines govern what teachers at your school include in the curriculum for their classes?

___1) A great deal
___2) A considerable amount
___3) A moderate amount
___4) Slightly
___5) Not at all
___6) Don't know

(24) 52. How much do schoolwide policies or guidelines govern the ways in which teachers at your school evaluate the academic performance of their students?

___1) A great deal
___2) A considerable amount
___3) A moderate amount
___4) Slightly
___5) Not at all
___6) Don't know

Do you have any additional comments on the ways in which decisions are made at your school?

_____

_____

_____

Relations with School Personnel

This next section deals with more of the ways your work may be related with that of other school personnel.

(25-27) 53. How often would you say instructional materials are shared among teachers at your school in each subject area? (Please circle the most appropriate number in each column)

	Math (25)	Reading (26)	Social Studies (27)
Very frequently	1	1	1
Frequently	2	2	2
Fairly often	3	3	3
Occasionally	4	4	4
Seldom	5	5	5
Never	6	6	6

(28) 54. How much released time (e.g., planning periods or minimum days) do you have for planning lessons or coordinating with with other teachers? (Answer in which ever category fits your situation)

_____ hours per day

or _____ hours per week

or _____ hours per month

55. On the average, how frequently would you say other teachers at your school (including team members, if applicable, and others) observe aspects of your performance in each area below (Please circle the most appropriate number in each row)

		Every Day	Several Times a Week	Once a Week	Once or Twice a Month	Less Than Once a Month
(29)	Teaching subject matter	1	2	3	4	5
(30)	Maintaining control in your class(es)	1	2	3	4	5

56. On the average, how frequently would you say your principal observes aspects of your performance in each area below?

		Every Day	Several Times a Week	Once a Week	Once or Twice a Month	Once or Twice a Year	Never
(31)	Teaching subject matter	1	2	3	4	5	6
(32)	Maintaining control in your class(es)	1	2	3	4	5	6
(33)	Record keeping	1	2	3	4	5	6

57. How often do you talk informally with other teachers in your school (including both team members, if applicable, and others) about...

		Every Day	Several Times a Week	Once a Week	Once or Twice a Month	Once or Twice a Month
(34)	Teaching subject matter	1	2	3	4	5
(35)	Maintaining control in your class(es)	1	2	3	4	5

(36) 58. How frequently do you discuss your teaching or your students with a specialist at your school?

___) Once a day or more often
___2) Several times a week
___3) Once a week
___4) Once or twice a month
___5) Less than once a month
___0) No specialists at my school

(37-42) 59. During a typical instructional period in each subject, how many aides and adult volunteers are in your classroom? (Please write in how many)

	Math Number:	Reading Number:	Social Studies Number:
Paid aide(s)	_____(37)	_____(38)	_____(39)
Adult volunteer(s)	_____(40)	_____(41)	_____(42)

60. Please indicate how much of their time your aides spend on each of the following types of activities?

		All of Their Time	Most of Their Time	Some of Their Time	None of Their Time
(43)	Instructing or tutoring students	1	2	3	4
(44)	Performing clerical tasks or supervising (monitoring) class avtivities	1	2	3	4

61. How helpful is your principal regarding each of the following areas?

		Extremely Helpful	Very Helpful	Moderately Helpful	Slightly Helpful	Not at all Helpful
(45)	Providing teachers with ways to gain new teaching ideas (e.g. through in-service training or visits to other schools)	1	2	3	4	5
(46)	Backing up teachers on student discipline matters	1	2	3	4	5
(47)	Supporting special projects you may wish to undertake	1	2	3	4	5
(48)	Relations with parents and the community	1	2	3	4	5

Do you have other comments regarding the questions in this section?

_____

_____

_____

Evaluation

Now we want to ask you some questions about how often you receive ratings or evaluations: for example, an evaluator may compliment you on your good work each day or criticize you for mistakes; you may occasionally receive formal written evaluation; an evaluator may simply indicate his judgments of your performance with a smile or a frown; an evaluator may look at how you are doing and say nothing, yet you may know whether or not he is satisfied.

In general, when you learn in <u>any</u> way, directly or indirectly, how well or poorly an evaluator thinks you are doing on a task, you are receiving an evaluation. Please remember that what we mean by evaluations includes much more than formal written evaluations.

We realize that the area of evaluation is undergoing change in California. For these questions, however, please answer only in terms of the current school year.

62. How often do you learn in any way, directly or indirectly, your <u>principal's</u> evaluation of how well or poorly you are doing on each task below?

		Very Frequently	Frequently	Fairly Often	Occasionally	Seldom	Never
(49)	Teaching subject matter	1	2	3	4	5	6
(50)	Maintaining control in your class(es)	1	2	3	4	5	6
(51)	Record keeping	1	2	3	4	5	6

63. How often do you learn in any way, directly or indirectly, <u>other teachers'</u> evaluations of how well or poorly you are doing on each task below?

		Very Frequently	Frequently	Fairly Often	Occasionally	Seldom	Never
(52)	Teaching subject matter	1	2	3	4	5	6
(53)	Maintaining control in your class(es)	1	2	3	4	5	6

64. In each area below, how soundly based are your principal's evaluations of your work (i.e., to what extent do his/her evaluations accurately reflect the quality of your performance)?

		Extremely Soundly Based	Very Soundly Based	Moderately Soundly Based	Slightly Soundly Based	Not at all Soundly Based
(54)	Teaching subject matter	1	2	3	4	5
(55)	Maintaining control in your class(es)	1	2	3	4	5
(56)	Record keeping	1	2	3	4	5

65. In each area below, how soundly based are other teachers' evaluations of your work (i.e., to what extent do their evaluations accurately reflect the quality of your performance)?

		Extremely Soundly Based	Very Soundly Based	Moderately Soundly Based	Slightly Soundly Based	Not at all Soundly Based
(57)	Teaching subject matter	1	2	3	4	5
(58)	Maintaining control in your class(es)	1	2	3	4	5

(59) 66. How helpful are the evaluations you receive from your principal in improving your teaching performance?

___1) Extremely helpful
___2) Very helpful
___3) Moderately helpful
___4) Slightly helpful
___5) Not at all helpful

(60) 67. How helpful are the evaluations you receive from other teachers at your school in improving your teaching performance?

___1) Extremely helpful
___2) Very helpful
___3) Moderately helpful
___4) Slightly helpful
___5) Not at all helpful

Although many people may evaluate your work, perhaps not all of them have influence on your organizational rewards and penalties.

The term, organizational rewards and penalties, includes many things for example, class assignments; room assignments; pay for extra services; tenure; scheduling preferences; salary; assignments of assistants; leaves of absence; access to equipment; being retained in services of the school, etc.

(61) 68. How important to you are the organizational rewards and penalties which your school offers?

___1) Extremely important
___2) Very important
___3) Moderately important
___4) Slightly important
___5) Not at all important

69. How much influence does each of the persons or groups listed below have on your organizational rewards and penalties? Is each:

		Extremely Influential	Very Influential	Moderately Influential	Slightly Influential	Not at all Influential
(62)	Superintendent or Assistant superintendent	1	2	3	4	5
(63)	Principal	1	2	3	4	5
(64)	The faculty of the school	1	2	3	4	5
(65)	Individual teachers	1	2	3		5
(66)	Members of your teaching team (if applicable)	1	2	3	4	5
(67)	Aides or volunteers (if applicable)	1	2	3	4	5
(68)	Parents	1	2	3	4	5
(69)	Students	1	2	3	4	5

70. In your opinion, how much influence should each of the persons or groups listed below have on your organizational rewards and penalties? Should each be:

		Extremely Influential	Very Influential	Moderately Influential	Slightly Influential	Not at all Influential
(70)	Superintendent or Assistant superintendent	1	2	3	4	5
(71)	Principal	1	2	3	4	5
(72)	The faculty of the school	1	2	3	4	5
(73)	Individual teachers	1	2	3	4	5
(74)	Members of your teaching team (if applicable)	1	2	3	4	5
(75)	Aides or volunteers (if applicable)	1	2	3	4	5
(76)	Parents	1	2	3	4	5
(77)	Students	1	2	3	4	5

Do you have any other comments on the way you are evaluated at your school?

_____

_____

_____

(4-10)

71. How good is the educational background of most of the students assigned to you this year?

___1) Excellent
___2) Very good
___3) Good
___4) Fair
___5) Poor

(11)

72. Which is the best estimate of the economic level of families whose children are in your class(es): (Circle more than one if it is impossible to generalize.)

___1) Low-income
___2) Low-middle-income
___3) High-middle-income
___4) High-middle

73. Please indicate whether you agree or disagree with each of the following statements.

(12) a. I could see myself helping to lead a workshop on teaching techniques.

___1)strongly agree ___2)agree ___3)neutral ___4)disagree ___5)strongly disagree

(13) b. I would be very much interested in showing other teachers styles and techniques I've developed.

___1)strongly agree ___2)agree ___3)neutral ___4)disagree ___5)strongly disagree

(14) c. If my school encouraged me in acquiring a supervisory certificate by financing me, I would be extremely interested.

___1)strongly agree ___2)agree ___3)neutral ___4)disagree ___5)strongly disagree

(15) d. I personally wish good teachers got more recognition.

___1)strongly agree ___2)agree ___3)neutral ___4)disagree ___5)strongly disagree

(16) e. I would be competent at making supervisory evaluations of other teachers.

___1)strongly agree ___2)agree ___3)neutral ___4)disagree ___5)strongly disagree

(17) f. It is very important for me to be in a school with many opportunities for advancement for the classroom teacher.

___1)strongly agree ___2)agree ___3)neutral ___4)disagree ___5)strongly disagree

(18) g. In general, the personality characteristics of the teacher are more important in determining success in teaching than any particular knowledge or set of skills the teacher possesses.

___1)strongly agree ___2)agree ___3)neutral ___4)disagree ___5)strongly disagree

(19) h. My work experience (since finishing my training) is extremely helpful in enabling me to carry out my work.

___1)strongly agree ___2)agree ___3)neutral ___4)disagree ___5)strongly disagree

(20) 74. In general, how satisfied are you with the school in which you presently teach?

Extremely Satisfied	Very Satisfied	Moderately Satisfied	Slightly Satisfied	Not at all Satisfied
1	2	3	4	5

(21) 75. In general, how satisfied are you with your occupation as a teacher?

Exrremely Satisfied	Very Satisfied	Moderately Satisfied	Slightly Satisfied	Not at all Satisfied
1	2	3	4	5

Thank you very much for completing this questionnaire. If you have other comments you may wish to add, please use the space below.

THANK YOU

_____

_____

_____

STUDENT QUESTIONNAIRE

(Unless possible responses are shown here, the student chose one of five responses ranging from "I'm one of the best" to "I'm one of the worst" or from "I like it a lot" to "I don't like it at all.")

1. Compared to the other kids in this class, how good are you at school work?
2. Compared to all other third graders, how good are you at school work?
3. Compared to all other third graders, how good are you at science?
4. When you answered the last question, were you (a) very sure which answer described you best, (b) pretty sure..., (c) pretty much guessing...?
5. How much do you like science?
6. Compared to all other third graders how good are you at arithmetic? (a) I'm a lot better, (b) I'm a little better, (c) I'm about in the middle, (d) I'm a little worse, (e) I'm a lot worse.
7. When you answered the last question, were you (a) very sure which answer described you best, (b) pretty sure..., (c) pretty much guessing...?
8. How much do you like arithmetic?
9. Compared to all other third graders, how good are you at playing games, like dodgeball or running races? (a) I'm a lot better, (b) I'm a little better, (c) I'm about in the middle, (d) I'm a little worse, (e) I'm a lot worse.
10. How much do you like playing games like dodgeball or running races?
11. Compared to all other third graders, how good are you at reading? (a) I'm a lot better, (etc.)
12. Do you think that will change? (a) It will probably stay the same, (b) ... probably change a little, (c) ... probably change a lot.
13. How much do you like reading?
14. Compared to all other third graders, how good are you at social studies? (a) I'm a lot better, (etc.)

15. Do you think that will change? (a) It will probably stay the same, (b) ... probably change a little, (c) ... probably change a lot.
16. How much do you like social studies?
17. Compared to all other third graders, how good are you at drawing? (a) I'm a lot better, (etc.)
18. How much do you like drawing things or making things?
19. Write in the names of the 3 kids in this class who are best at math.
20. Write in the names of the 3 kids in this class who have the most trouble in math.
21. How often do you decide what time to work on different subjects? (a) I usually decide, (b) Sometimes I decide, but usually my teacher tells me, (c) I almost never decide. My teacher tells me.
22. How often do you decide what kind of work you will do for school? (a) I usually decide...(etc.)
23. Do you think you will go to college? (a) Yes, (b) No, (c) I don't know.
24. What kind of job do you want to have when you grow up?
25. Write in the names of the 3 kids in this class who are best at social studies.
26. Write in the names of the 3 kids in this class who have the most trouble in social studies.
27. Write in the names of the 3 students in this class who you like the most.
28. Circle the drawing which shows how many kids in this class like you and want to be your good friend. (a) (Drawing of one face in a box), (b) (Drawing of three faces), (c) (Drawing of six faces), (d) (Drawing of ten faces), (e) (Drawing of fifteen faces).
29. Circle the one that describes you best.
    Example 1.

    TALL very pretty middle pretty SHORT

    Example 2.

    WEAK very pretty middle pretty STRONG

    (continues with HAPPY/SAD, LAZY/HARD WORKING, MEAN/KIND, SUCCESSFUL/UNSUCCESSFUL, LEADER/FOLLOWER, GOOD LOOKING/NOT GOOD LOOKING, DUMB/SMART, EASY TO GET ALONG WITH/HARD TO GET ALONG WITH).

30. Do you usually know how your teacher thinks the other kids in the class are doing at their school work? (a) Yes, (b) No.

31. Do you think it's true that some kids are just smarter at most things than other kids? (a) I'm sure it's true, (b) I think maybe it's true, (c) I think maybe it's not true, (d) I'm sure it's not true.

32. What kind of jobs do your mother and father have? (a) mother's job, (b) father's job.

33. How much do you like school?